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ABSTRACT

This book, which is an informal initiative of a group of 31 concerned South African specialists and practitioners in education and training, is designed to provide readers with a broad overview of South Africa's National Qualifications Framework, suggested tools/mechanisms for working within the National Qualifications Framework, and understanding of the roles and structures associated with the South African Qualifications Authority. Part 1 is an introduction to the National Qualifications Framework that includes a glossary, discussion of the framework's beneficiaries, and criticisms of the framework. Proposed in part 2, which examines building the framework, are strategies for approaching integration, looking at performance, describing competence and capabilities in different fields of learning, and describing qualifications. Presented in part 3, which focuses on the framework in practice, are the following: five stages in getting started; practical examples of setting standards; and functions and structures associated with the National Qualifications Framework. The text of the South African Qualifications Authority Act of 1995 and a proposed classification system for education and training for the National Qualifications Framework in South Africa are appended. (MN)

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Ways of seeing the National Qualifications Framework

ED 396 175

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WAYS OF SEEING
THE
NATIONAL QUALIFICATIONS
FRAMEWORK

NOTICE

An Inter-Ministerial Working Group (IMWG) was established in June 1994 by the Ministers of Education and Labour in order to pursue their common policy interest in an integrated approach to education and training, and prepare legislation for the creation of a National Qualifications Framework (NQF).

The white paper, Education and Training in a Democratic South Africa: First Steps to Develop a New System (Department of Education, March 1995), in the chapter 'Why Education and Training', and elsewhere, spelled out the government's policy approach on the NQF, and its intention to establish the South African Qualifications Authority (SAQA).

After the draft National Qualifications Framework Bill was published for public comment and consultation in June 1995, the two Ministers re-constituted the Inter-Ministerial Working Group and renewed its mandate. It was given the responsibility for assisting the Ministers in the process of steering the new legislation through Parliament, and preparing the way for the establishment of SAQA.

The IMWG now comprises senior officials of the Departments of Education and Labour, the chairperson of the National Training Board, and members nominated by organised business, organised labour and the organised teaching profession. It reports to the two Ministers through their respective Directors-General.

The South African Qualifications Authority Bill, 1995, was passed by Parliament in September 1995.

The IMWG is now engaged in the task of preparing for the establishment of the Authority. This task includes monitoring and helping to co-ordinate the development of work on the National Qualifications Framework, including work towards the determination of learning standards and quality assurance mechanisms, through a number of pilot projects which are being undertaken in the education and training spheres. In doing so, the IMWG is helping to forge the integrated approach to education and training which is a primary goal of both Ministries and the Government of National Unity.

As the *Foreword* indicates, this book is an informal initiative of a group of concerned specialists and practitioners in education and training. It is not an official volume of the Ministries of Education and Labour. The authors have not sought and have not received official endorsement for their analysis and findings.

The Inter-Ministerial Working Group wish it to be known that the National Qualifications Framework has not yet been formally developed or approved. This task will be the responsibility of the South African Qualifications Authority, which at the time of publication, has not yet been established.

The IMWG considers that this book is an important contribution to the continuing investigation and discussion on how a National Qualifications Framework should be designed.

In the interests of gathering all relevant information which could assist SAQA in its work, the IMWG invites any reader of this volume who wishes to comment on its analysis and proposals, or who has an independent comment on the way in which the National Qualifications Framework should be conceived and implemented, to write to the following address:

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Secretary
Inter-Ministerial Working Group
Private Bag X895
PRETORIA 0001

TREVOR COOMBE
CHAIRPERSON
INTER-MINISTERIAL WORKING GROUP
OF THE MINISTRIES OF EDUCATION AND LABOUR

WAYS OF SEEING THE NATIONAL QUALIFICATIONS FRAMEWORK

Human Sciences Research Council

October 1995

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We acknowledge with thanks the use of Professor Ian Bellis's visual representation of the National Qualifications Framework as a structure which supports an upward-moving learning pathway. The smaller box, also containing a learning spiral, suggests that even within the smallest unit standard, clear learning progressions will be incorporated.

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FOREWORD

The Human Sciences Research Council (HSRC) has committed itself to conducting and promoting research which seeks workable solutions to human problems, and especially to establishing a just and sound society in South Africa. We are committed also to working cooperatively wherever possible with other organisations and institutions in order to extend and develop thinking and research which promotes an equitable society. It has been in this spirit that the HSRC undertook to nurture an informal exploration of ideas surrounding the growth of a national qualifications framework, and to present the book that arose out of these discussions for general consideration.

I was privileged to have been involved in the influential work which emerged from the National Training Board's *National Training Strategy Initiative* and the subsequent efforts, under the auspices of the National Training Board to 'grow the National Qualifications Framework'. We, at the HSRC, were pleased to have assisted with the production of a document on the Recognition of Prior Learning, and an associated workshop. In a sense this book too is an extension of sorts of the work initiated by that group.

Arising from my involvement in the *National Training Strategy Initiative*, I was also privileged to have been a member of the Task Team, coordinated by the Centre for Education Policy Development, which compiled the report on "A National Qualification Framework and the Establishment of the South African Qualification Authority" for the African National Congress' "*Implementation Plan for Education and Training*," published in May 1994.

There has been great caution, and justifiably so, about engaging in issues around the South African Qualifications Authority and the National Qualifications Framework, especially because no one would wish to preempt important decisions which the Ministries of Education and Labour would make. However, the idea of a national qualifications framework is such a promising - not to say provocative - idea that it was inevitable that pockets of people have started to explore what forms such an idea might take.

The group whose work is gathered in this book came from a variety of sectors - the tertiary sector, the trade unions, from an adult basic education and training organisation, from training boards, the Department of Education, the Independent Examinations Board and from the HSRC itself. The only factor which has bound them together has been a consuming interest in the challenges of turning a vision into some form of reality. The work that has been done here has been thoughtful, experimental and tentative, but it was done in the face of really

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difficult practical questions:

- *What will an authority like the South African Qualification Authority need to be like and what will it need to do to succeed?*

- *What will an outcome need to look like if we are going to be able to compare outcomes across learning pathways?*

- *What kinds of assessment will such a comprehensive system presuppose?*

- *How can one level possibly be distinguished from another?*

- *What constitutes a qualification?*

- *How will quality be assured?*

Questions such as these clearly do not have single or unambiguous answers. Setting up an assessment system for *all* of South African education and training will certainly require multiple answers and complex tradeoffs. That is the nature of the political-educational arena in which the ideas surrounding the National Qualifications Framework are functioning.

This book, because of its multiple authorship, is unlikely even in itself to provide a single, unifying vision of what the South African Qualifications Authority and the National Qualifications Framework might be like. What it offers instead, is the result of creative ferment, the fruits of a series of workshops where people participated more in their personal capacities than as formal representatives of particular constituencies.

It is for this reason that the group - whose history and names are included in the book - has impressed upon me the responsibility of stating clearly and unambiguously that this book is presented in the interests of promoting debate around the difficult questions that were outlined above. Furthermore, because the book has grown out of the work of a small group of individuals who have struggled collectively, it can claim no authority for itself. Although the HSRC has undertaken to support the vigour of this small group of explorers, there is no desire on the part of this organisation to corner work in this field, nor to claim any special status for the research presented here.

I am certain that some of the ideas presented here will be useful and carried forward, while others will provoke reaction and foster new lines of thinking and so be superseded. Some of the ideas here may never have a life beyond these pages. Such are the risk one takes with research. Nevertheless, this book, whose appearance will shortly follow the publication of legislation on the National Qualifications Framework, has been put together and is offered in a spirit of cooperative endeavour. I trust that its usefulness will ultimately prove justification enough for its being published.

Rolf Stumpf.

R H STUMPF
PRESIDENT
Pretoria, October 1995

ABOUT THIS BOOK

Arriving at this point in the writing of this book has been a fairly tortuous process. Even identifying the moment when the book was born is not easy, although we can say with certainty that it had a predecessor in the form of a document which was prepared in October 1994 for Working Group 9 of the National Training Board.

That document incorporated certain ideas which had gained prominence during a study trip to the United States of America undertaken by a group of South Africans, who shared an interest in the South African Qualifications Authority and the National Qualifications Framework. The document, called *Contributing to the growth of the National Qualifications Framework*, was never formally tabled or accepted by Working Group 9. Some of the ideas in that document nevertheless survived and have been taken up and pushed a lot further in this book.

The decision to have - at that stage - a single workshop on ideas surrounding the National Qualifications Framework emerged at an end-of-the-year meeting (HSRC, Johannesburg; 5 December 1994) where the fate of Working Group 9's ideas was discussed. A workshop meeting was set for mid-January and the HSRC undertook the practicalities of setting up an informal workshop. The people who were invited were ones who had an interest in the field or who had done some work which was in some way related to the concerns. A range of people participated in the series of workshops that grew out of the initial meeting in January. The participants, in alphabetical order, were:

Adler, David	Independent Examinations Board
Ansara, Tony	Hospitality Industry Training Board
Bellis, Ian (Prof)	Human Resources, Rand Afrikaanse Universiteit
Bird, Adrienne	Metal Engineering Industries Education and Training Board
Burroughs, Elizabeth	Human Sciences Research Council
Campher, Thomas	Department of Education
Cooper, Linda	Deal Trust, University of Cape Town
Du Toit, Pam	Human Sciences Research Council
Elliott, Gail	Independent Examinations Board
Engelbrecht, Schalk (Dr)	Human Sciences Research Council
Foks, Jack	South African Institute for Distance Education
Gamble, Jeanne	University of Cape Town
Gerber, Braam	Eskom
Gordon-Davis, Lisa	Hospitality Industry Training Board
Hall, Ken	Eskom
Hanrahan, Hu (Prof)	Engineering Council of South Africa
Hendrikse, Johan	Spoornet
Isaacs, Sam	Peninsula Technikon

Kerfoot, Caroline	USWE
Leith, Craig	Hospitality Industry Training Board
Lugg, Rosemary	Human Sciences Research Council
Machin, Alistair	Congress of South African Trade Unions
McLean, Daryl	USWE
Morotoba, Sam	Congress of South African Trade Unions
Omar, Rachmat	Congress of South African Trade Unions
Tyers, John	Transnet Training Board
Van der Merwe, Melinda	Transnet Training Board
Verster, Johan	Hospitality Industry Training Board
Verwey, Anton	Spoornet
Vieyra-King, Melissa	Independent Examinations Board
Vorwerk, Christoph	Plastics Industry Training Board

During the first workshop, which was a sort of 'show and tell', a number of questions arose which could not be answered straight away, and which participants then went off to grapple with. The responses generated as a consequence were compiled into a document and posted out in advance of the next workshop. This became the process for working together. It was, however, strongly felt at each of the workshops, that the life span of this small group had to be limited, but that - in a very real sense - the group had a responsibility to its sponsors and to people beyond the group to share whatever might be useful in its thinking.

The fact that these workshops happened owe a great deal to seed money put up by Eskom, the HSRC and Transnet, to the organisational skills of people at Eskom and the Transnet Training Board and especially to those of Pam du Toit of the HSRC's Adult Basic Education unit. Adrienne Bird provided the inspiration at the workshops when everyone else started flagging and Professor Ian Bellis served as mentor at critical points in the process. (He also read 'edifying literature' - politically-correct tales - to participants by way of encouragement at well-chosen moments.) All the participants provided useful information, asked difficult questions and helped each other to a better understanding of what lies ahead. However, there are some people who put a special degree of effort in to the production of this book, and we would like to acknowledge them with thanks.

Various people have been responsible for the evolution of the book, from Pam du Toit who put together the earliest workshop documents, through to Caroline Kerfoot who did much to reorganise all the documents for an earlier version of this book. Helene Perold and Liesa Jossel edited the penultimate version, while the final version was the result of intensive cooperation between Gail Elliott, Rosemary Lugg, Elizabeth Burroughs and Helene Perold.

In addition, there are a group of participants who put a great deal of effort into writing and re-writing materials as the deadlines grew closer. We would like to thank Adrienne Bird, Thomas

Campher, Gail Elliott, Jeanne Gamble, Ken Hall, Hu Hanrahan, Rosemary Lugg, Alistair Machin, John Tyers and Christoph Vorwerk for their hard work. Not to mention those people who wrote and re-wrote (and re-wrote) unit standards each time the format changed! Some of them already have been mentioned, others are contact persons for the examples given in Chapter 9.

The final document was submitted to members of the group for final input a week before the last workshop, and was agreed upon in principle - if not in each and every detail - by all those who attended the September 1995 workshop.

It has not been easy to compile this book as we are aware that there are many different audiences, and that some may have only scant knowledge of the National Qualifications Framework or only an interest in a specific area. There are also those whose interest in the book lies in extracting the nitty-gritty detail. So, the book contains both general and very detailed ideas. We know that we have not answered all the questions - on the contrary, every time we thought we had answered a question, we discovered that we had asked another two or three in the process!

So, while this book has ventured suggestions, what the group most hopes to have achieved is to open up the National Qualifications Framework arena for debate.

WHAT'S IN THIS BOOK

This section is a "roadmap" to the book to help guide you through the book. We provide a brief description of each chapter, and then suggest to whom the chapter might be of particular interest.

This book aims to provide the reader with:

A broad overview of the National Qualifications Framework, in particular
- the reasons for establishing such a framework,
- the basic principles on which the framework is based

An explanation of the key terminology used within the National Qualifications Framework, in particular
- competence, capabilities, standards, units, qualifications, knowledge, assessment and learning outcomes

Practical examples of
- setting standards,
- seeking and obtaining accreditation for qualifications ;
- combining units to form accredited qualifications

Suggested tools and mechanisms for working within the National Qualifications Framework

and

An understanding of the roles and structures associated with the South African Qualifications Authority

PART I INTRODUCING THE NATIONAL QUALIFICATIONS FRAMEWORK

Glossary:

The National Qualifications Framework debate has given rise to many terms which are used with a specific meaning. The glossary explains these terms and the particular way in which these are used throughout this book.

Who for? The Glossary is useful for all readers in that it helps to ensure a common understanding of terms and concepts.

Chapter 1 An introduction

In this chapter we hope to give a basic overview of what the National Qualifications

Framework is. Using a question and answer format, we address questions such as why there is a need for a National Qualifications Framework, what principles inform the framework, how it may work and what structures may be associated with it.

Who for? This chapter will be useful for people who know little about the National Qualifications Framework and who would like to get a basic overview in what it is.

Chapter 2 Who will benefit?

This chapter addresses the National Qualifications Framework from a practical point of view, by giving concrete examples of how different groups will derive benefit from the framework. It asks - and gives answers to - for example, what the framework might mean for an adult learner, or a school teacher, or a student at school.

Who for? This chapter will be relevant to almost any person, organisation or grouping involved in education and training, whether as a student, or a provider.

Chapter 3 Some criticisms

In this chapter, we deal with some criticisms that have been raised about the National Qualifications Framework, and then comment on each criticism.

Who for? This chapter will appeal to anyone who entertains reservations or doubts about the purpose of the National Qualifications Framework.

PART II BUILDING THE FRAMEWORK

Chapter 4 Approaching integration

This chapter provides some insights into the process that led to this book, and puts that process into a much larger context. There have been several policy development processes through which people have explored ideas for a National Qualifications Framework.

Who for? This chapter will be particularly interesting to people who want to follow the National Qualifications Framework debate, and who want to know how the ideas have been gradually constructed. This chapter could also be useful to people who have not been involved in policy development processes - it gives an insight into how policy and knowledge gets constructed!

Chapter 5 Ways of looking at performance

This chapter continues to tell the story of our process, and of how our thinking developed. It concentrates primarily on the many debates we had about "knowledge", and our ideas around the search for "evidence" that learning has happened. Our understanding seeks to develop an integrated approach to learning, which is reflected in the notions of performance, transfer and assessment that are developed in this chapter.

Who for? This chapter is probably of particular interest to people who are concerned with how people learn, and how the National Qualifications Framework could support learning progression. People involved in developing learning initiatives, especially across different levels of learning complexity, may also be interested in this chapter.

Chapter 6 Describing competence and capabilities in different fields of learning

This chapter explores in detail what we mean by "competence" in terms of performance and what we mean by "capabilities" which make up competence. It relates performance to different fields of learning and examines the implications of describing levels across different fields of learning.

Who for? This chapter will be particularly interesting to people who are involved in the provision of learning that leads to - or could lead to - a qualification, to people who set qualification requirements, and to people who may wish to work towards a qualification.

It will be of interest to people who are thinking about, or who are involved in setting learning standards that they hope will be registered on a future National Qualifications Framework. It will also be of interest to those people who may then be required to undertake the learning initiatives linked to the standards.

Chapter 7 Describing qualifications

This chapter outlines some of the criteria which the South African Qualification Authority would need to consider in registering a unit or a qualification, and proposes some possible formats for qualifications and unit standards.

Who for? Stakeholders who are likely to be involved in the formulation of unit standards and qualifications will find this section of interest, as will providers who may be involved in teaching and in assessment.

PART III THE FRAMEWORK IN PRACTICE

Chapter 8 Five stages in getting started

This chapter makes a very deliberate shift to the level of "making it happen". It sets out ways in which stakeholders in a particular field can start the process of setting standards, describes ways of establishing a National Standards Body, and provides guidelines on how to write standards.

Who for? This chapter will be particularly useful to people who are involved in setting up a national standards body and to people who may be engaged in the writing and implementations of standards.

Chapter 9 Practical examples of setting standards

This chapter describes eight projects in various sectors that each contributes to building an understanding of how the National Qualifications Framework might work. The examples we offer come from a range of contexts, including industry training boards, adult basic education and training and engineering higher education. At the end of the chapter, we offer a brief analysis of some common trends emerging out of the projects.

Who for? This chapter is useful for people who would like to know about current practice which informed our thinking and what projects are happening "out there". It will also be useful for people who would like to see practical examples of the ideas in the book.

Chapter 10 Functions and structures associated with the National Qualifications Framework

The South African Qualifications Authority Act refers to structures that will be responsible for putting the National Qualifications Framework into operation. This chapter looks at some models for National Standards Bodies as well as Education and Training Qualifications Authorities and of structural ways to manage the integrated approach to education and training so that the quality of learning is always at the heart of the system.

Who for? This chapter is likely to be of interest to people involved in setting up the South African Qualifications Authority and the National Qualifications Framework, or to people interested in forming a National Standards Body or an Education and Training Qualification Authority.

Current education and training providers might want to think about where and how they can fit into the structures discussed in this chapter. This chapter will be of interest to people concerned about how quality will be maintained and controlled in the system.

PART 4 APPENDICES

Appendix A contains the text of the South African Qualifications Act of 1995.

Appendix B discusses the classification of education and training subject matter in relation to the National Standards Bodies.

GLOSSARY

Developing and exploring aspects of the National Qualifications Framework has meant using and defining words and terms in a particular way, a way that many readers may find confusing, or even mystifying. To assist you, the reader, we have defined some of the terms that are used throughout the book.

Ability: is a generic term for the mental and physical processes that people use, such as communication, decision-making, problem-solving and using tools. These abilities are at the core of all training and education and provide the means of performing tasks in a learning, work or everyday situation. Abilities are developed through engaging with *knowledge* and *activities* in a context. Abilities cannot be directly assessed: rather, *assessment* is carried out indirectly via the performance of tasks which rely on *abilities* for their completion.

Access: a principle of the *National Training Strategy Initiative*, which provides for entry points at appropriate levels of education and training for all prospective learners in a way which facilitates *progression*.

Accreditation: a procedure by which an authoritative body gives formal recognition that an institute, body or person is competent in terms of a specific purpose.

Articulation: a *National Training Strategy Initiative* principle which provides for learners, on successful completion of accredited prerequisites, to move between different providers in the education and training system.

Assessment: the process of determining *capability* which is carried out by observing and evaluating *performances*. There are different ways in which assessment may be carried out.

Capability: the expression of generic abilities as they relate to specific content areas, context and value frameworks. A capability is the basic enabling component of *performance* which involves generic abilities acting in relation to defined *content* areas, contexts and value frameworks. In order to identify a person's capabilities, it is possible to use the format: "This person is capable of ......ing". For example, a competent plastician must be capable of, inter alia, overseeing the quality system. (See also competence).

Coherence: a *National Training Strategy Initiative* principle which requires the adherence to principles of a framework for *qualifications* established at a national level.

Competence: the capacity for continuous *performance* within specified ranges and contexts resulting from integration of a number of *capabilities*.

Credit: recognition by an accredited body that a learner has satisfied the *outcomes* of a *unit of learning*, expressed as a *credit value* at a specified *level*.

Education and Training Qualifications Authorities (ETQAs): the term for the bodies that the South African Qualifications Authority will accredit to be responsible for monitoring and auditing achievement in terms of standards.

Flexibility: a *National Training Strategy Initiative* principle which refers to the facility of the qualification system to meet the needs of learners, providers, industry and service sectors.

Knowledge: is *what we know* (ie. information) which has been internalised, and also comprises *how we think* and *understand*. Put another way, knowledge is information, theory, arguments or concepts that have been contextualised within our own particular mental and affective or emotional structures.

Learning: is a *process* which enables a learner to approximate, with increasing success, a *capability*, which integrates the use of information (or content) with a variety of general abilities (such as problem-posing and problem-solving, "tool" usage, communication and social interaction) within a context which has an informing value system.

Level: the National Qualifications Framework has a number of levels representing a progression of the *learning* processes carried out and the increasing complexity of the capabilities employed. Levels allow *progression* from any starting point through a meaningful pathway to higher levels.

Moderation: is the process of ensuring that *assessment* is objective and fair and a means to guard against a "standards drift" across accredited providers.

National Standards Bodies (NSBs): bodies that the South African Qualifications Authority will register which will be responsible for establishing education and training standards.

Outcome: is that segment of a *unit standard* which is a statement of the required learner *capabilities* that must be demonstrated. Outcomes are specified by stated *performances* and *assessment* and *range* criteria.

Performance(s): are holistic or integrated *demonstrations* of mental, affective and manual activities. Performances also express particular values. Demonstration of performance for *assessment* requires completion of specified tasks, as well as explanation of the rationale for doing tasks in particular ways.

Portability: refers to transferability of *credits* or *qualifications* between providers and employers. This is a *National Training Strategy Initiative* principle.

Qualification: means the formal recognition of the achievement of the required number and range of *credits* and completion of an integrated assessment and other possible requirements at a specific level on the National Qualifications Framework. The requirements for a qualification will be determined by bodies registered for the purpose of establishing education and training standards, National Standards Bodies, and/or bodies established for the purposes of making recommendations regarding the rules of combination and requirements for the issuing of qualifications.

Qualifications Council(s): bodies that may be established under the auspices of the South African Qualifications Authority to determine and recommend rules of combination, integrative assessment and other criteria for the issuing of qualifications at particular levels on the National Qualifications Framework. Such Councils are important for establishing articulation and equivalency across adult learning and school learning levels.

Record of learning/credit: A document for each learner that reflects the *credits* and *qualifications* earned by the learner.

Recognition of prior learning: granting *credit* for a unit on the basis of an *assessment* of formal and non-formal learning/experience to establish whether the learner possesses the *capabilities* specified in the *outcome statement*. Similarly, a person could gain recognition for prior learning in respect of an entire qualification, provided that such a person is able to demonstrate the full *competence* associated with that qualification.

Registration: a process by which a National Standards Body submits unit standards to the South African Qualifications Authority for inclusion on the National Qualifications Framework.

South African Qualifications Authority (SAQA): will be a national body that will, *inter alia*, define levels, formats for unit standards and requirements for the registration of qualifications.

Transfer: the application of *capabilities* in contexts other than those in which initial *learning* took place.

Unit standard: a statement of the *outcomes* that are to be achieved by an individual in order to obtain credit for the *unit* together with identification and administrative information. Unit standards are nationally agreed and internationally comparable.

CHAPTER 1

AN INTRODUCTION

In this introductory chapter we give a general overview of the National Qualifications Framework, using a question and answer format.

BACKGROUND

Although not yet a commonplace in the thinking of a majority of South Africans, a major initiative called the National Qualifications Framework has been proposed to address some of the urgent reforms needed in South African education and training. The thinking which has been done about the National Qualifications Framework, or NQF as it is more commonly known, has been done in the hope of finding a system which would take a holistic view of the personal, social, and economic needs of our rapidly developing society, and then propose ways forward to address all these concerns on a broad and integrated front.

In this Chapter we hope to address the most basic questions which people might ask when introduced to the idea of a National Qualifications Framework for the very first time.

Why do we need educational and training reform in South Africa?

It is difficult to imagine that there is anyone in South African education or training who is not aware of the present difficulties being faced in those fields. Such difficulties are being experienced quite acutely as people grapple with creating a unified system from the multitude of educational bodies which governed South African education and training not so very long ago.

Three major challenges which face South Africans in the field of education and training have been identified:

- First and foremost, we need to create an equitable system of education and training which serves *all* South Africans well. Such a system will need to accommodate those people who are in conventional schools, colleges and training programmes. It will also need to find ways to include the learning needs of the many South Africans who have not enjoyed formal education and training.

- There is an understanding that, in order to achieve significant levels of economic growth and to become internationally competitive, the quality of our education *and* training will have to be greatly improved. The present level of education and training is inadequate for meeting these needs.

- Education and training have been separated, both by the way they are organised and by the way society thinks about them. For example, academic study is generally perceived to be more 'valuable' than training for useful occupations.

In addition, neither education nor training has fully recognised the importance of formally including the more general abilities such as communication, problem-solving and learning-how-to-learn into learning programmes. These abilities are essential if knowledge is to be applied effectively. As the recently released White Paper on Education and Training puts it:

> *"successful modern economies and societies require the elimination of artificial hierarchies, in social organisation, in the organisation and management of work, and in the way in which learning is organised. They require citizens with a strong foundation of general education, the desire and ability to continue to learn, to adapt to and develop new knowledge, skills, and technologies, to move flexibly between occupations, to take responsibility for personal performance, to set and achieve high standards, and to work co-operatively".*[1]

Many of the present issues within training and education are the results of apartheid policies, practices and mind sets. It has been a system which has denied many South Africans the opportunity for personal development and the chance to contribute to the economy. Equally, the system has failed to provide the country with a large, productive workforce matched to the needs of employment. *In short, there is a clear need for an approach that makes education and training more flexible, efficient and accessible. The answer being proposed in this book is the integration of education and training into a single, coherent and unified approach: the National Qualifications Framework or NQF.*

The Framework will prevent learners from being locked into one learning compartment or another, as happened in the fragmented system. In future, learners must readily be able to move between various areas and levels of learning, taking with them recognised credits for the learning that has already taken place. Such an integrated approach to learning, it is argued, will benefit the individual learner, the education and training system, and the economy.

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[1] Department of Education, 1995:15

What does an integrated approach really mean? And how can it be achieved?

Perhaps it is helpful to begin answering this question by describing more clearly what we mean when we use the word *integrated*.

In the first place, we mean that a *culture of learning* is central to both education and training, and must be seen as equally important in both spheres. Both are sites where learning of skills, knowledge *and* the generic abilities such as communications, problem-solving and working well with people can be acquired.

One of the hallmarks of an integrated approach is that it will take into account and give value to the kind of learning that people have already achieved in their lives, whether at school, on-the-job or even on-the-street. This recognition of what people already know is called Recognition of Prior Learning.

In an integrated approach, people should be able to *enter (or access)* the education and training system at a point that depends on their prior learning. So for example, an adult woman who left school at age 12 with a Standard 5 and who now, at age 35, wants to study further, may not have to begin with Standard 6. She will be assessed to see what she knows and what she can do, and she can then enter the system at the point that suits her.

Another feature of the integrated approach is that learners can keep *progressing up* levels, by gaining credits for successfully completing units. They can also *move across* different fields, which means that their credits are *portable* or transferable. So the 35-year-old adult learner can use her credits to enter the training world, for example. Relevant credits must be readily transferable across different programmes, industries and education and training providers.

It is proposed that to achieve an integrated approach, South Africa needs a *National Qualifications Framework*. The aim of this framework is to unify qualifications in education and training based on set standards and set assessment procedures that are nationally applicable.

The purpose of a National Qualifications Framework is to make it possible for all candidates to achieve national qualifications through a wide variety of mechanisms and a multiple delivery system. The Framework will generate coherence across the traditional divides of education and training, and allow articulation between currently fragmented and divided sectors and institutions. It will also provide access to, and progression through, recognised qualifications for all learners, whatever their level, and allow learners to transfer credit across different modes of study and qualifications within the national framework.

Consequently, learning in many different kinds of learning situations could be recognised and its value assessed. For example,

- informal learning in the community, at home or at work;
- school learning -both full- and part-time;
- in employee-provided courses;
- formal or institutional learning at any education and/or training institution such as a community or a technical college;
- learning through participating in employment-creation, regional development or youth-employment schemes;
- learning through distance programmes;
- instruction in religious classes;
- learning through courses provided by non-governmental organisations.

Indeed, any assessable learning acquired through any combination of these can be recognised via a process called the assessment of prior and experiential learning, and due credit awarded.

How will the National Qualifications Framework be established?

We need to identify firstly, the official processes that will lead to the establishment of the National Qualifications Framework, and secondly, the actions that will be required on the part of a large number of stakeholders.

At an official level, there is already a clear commitment from Government expressed in the Education and Training White Paper (1995) to establish the National Qualifications Framework. Indeed, the Minister of Education will ultimately accept executive responsibility in Cabinet for the National Qualifications Framework.

In the last quarter of 1994, an Inter-Ministerial Working Group was brought together to look more closely into the proposed South African Qualifications Authority, a governmental body which would be responsible for the development and management of the National Qualifications Framework. This Inter-Ministerial Working Group has representation from major constituencies, such as, the Departments of Education and Labour, the National Training Board, organised business and organised labour. The Inter-Ministerial Working Group was charged with producing draft legislation for the creation of the South African

Qualifications Authority and the associated National Qualifications Framework. The Act has been published, commented on and revised in the light of public comments, and has been passed by Parliament as the South African Qualifications Authority Act.

The system outlined in the Act has three structural elements:

- the coordinating structure, the South African Qualifications Authority;
- bodies registered by the South African Qualifications Authority to set standards in particular areas of learning, generally referred to as National Standards Bodies; and
- bodies accredited by the South African Qualifications Authority to ensure that the standards set are in fact delivered. These bodies are generally referred to as Education and Training Qualification Authorities.

The passing of the Act clears the way for the South African Qualifications Authority to come into existence. The Ministers of Education and Labour will appoint the South African Qualifications Authority Board which becomes responsible for establishing the National Qualifications Framework and maintaining it. The South African Qualifications Authority Board will also grant formal recognition to standards-setting bodies and quality assurance bodies.

At the stakeholder level, there appears to be a general consensus - in government, among business, labour, adult basic education and some professions - on the need for the South African Qualifications Authority and the National Qualifications Framework. Other sectors have been less enthusiastic in their response to the idea of a South African Qualifications Authority and a National Qualifications Framework. Yet other sectors have still to formulate and share their responses.

The National Qualifications Framework is envisaged as being developed and implemented on an interdepartmental basis, with fully consultative processes of decision-making, including all concerned government departments, education and training providers, and major national stakeholders in education and training. An attempt is being made to fully involve all these national stakeholders around clearly articulated nationally-agreed objectives, while at the same time recognising the right of individuals to learn and the right of institutions to provide learning opportunities, as each think most appropriate.

In many different contexts, South Africans are already starting to grapple with the challenges of having to work together and to accommodate the needs of constituencies they have not needed to consider very much previously. The business sector sees the opportunities provided by the proposed National Qualifications Framework as a means to become more globally competitive, and are attempting to position themselves accordingly. Organised labour sees the legislation as giving the nod to lifelong learning opportunities, especially for people whose access to decent education was limited or denied. Educational institutions, training institutions, and the people who are teaching in them also are working to understand how these changes will affect what they do and the way that they do it. All, in some way, seek a model which make things easier by providing guidelines and a procedure to follow.

In short, we envisage the National Qualifications Framework as "growing" through a process of tactful direction from the South African Qualifications Authority Board and by harnessing the creative force of a wide range of people in the education and training sectors working through their respective standards-setting bodies.

A NEW APPROACH TO EDUCATION AND TRAINING

What principles underlie the National Qualifications Framework?

A set of principles was developed in *the National Training Strategy Initiative*[3] process to help analyse the education and training systems of foreign countries, to assess their relevance for South Africa, and to evaluate the education and training strategy for our country as it emerged during the research. These in turn, have come to underpin the decisions which have led to the promulgation of the South African Qualifications Authority and the development of the National Qualifications Framework.

This set of principles is reproduced in the table on the following page:

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[3] National Training Board, 1994 *A discussion document on a National training Strategy Initiative*

Principle	Definition : Education and Training should ....
Integration	form part of a system of human resources development which provides for the establishment of a unifying approach to education and training.
Relevance	be and remain responsive and appropriate to national development needs.
Credibility	have national and international value and acceptance.
Coherence	work within a consistent framework of principles and certification.
Flexibility	allow for multiple pathways to the same learning ends.
Standards	be expressed in terms of a nationally agreed framework and internationally acceptable outcomes.
Legitimacy	provide for the participation of all national stakeholders in the planning and coordination of standards and qualifications.
Access	provide ease of entry to appropriate levels of education and training for all prospective learners in a manner which facilitates progression.
Articulation	provide for learners, on successful completion of accredited prerequisites, to move between components of the delivery system.
Progression	ensure that the framework of qualifications permits individuals to move through the levels of national qualifications via different appropriate combinations of the components of the delivery system.
Portability	enable learners to transfer their credits or qualifications from one learning institution and/or employer to another.
Recognition of prior learning	through assessment give credit to learning which has already been acquired in different ways, e.g. through life experience.
Guidance of learners	provide for the counselling of learners by specially trained individuals who meet nationally recognised standards for educators and trainers.

The principles suggested for the National Qualifications Framework indicate clearly that the Framework is intended to be a way of achieving a fundamental restructuring of the education and training system. It will serve to encourage the creation of new and flexible curricula, to promote the upgrading of learning standards, to monitor and regulate the quality of qualifications, and will permit a high level of articulation between qualifications based on the recognition and accumulation of credits.[3]

How will the National Qualifications Framework help us to adopt a new approach to learning?

One of the main purposes of the National Qualifications Framework is to change the way people think about training and education. The National Qualifications Framework will help to transform our thinking in the following ways:

- It enables us, as a nation, to acknowledge that *all learning* is for a purpose, and that good learning can serve pressing national priorities such as social and economic development.

- The National Qualifications Framework provides a coherent way of thinking about education and training, and about how learning relates to competence. It will help people to acknowledge that any learning activity should be aimed at making the learner more capable.

- The National Qualifications Framework enables us to recognise that much learning takes place outside the formal delivery system and that learning should be assessed against nationally acceptable standards, and recognition given accordingly. In short, the litmus test is: "Can you perform to the required standard?" not "Where did you learn?"

- The National Qualifications Framework can help us to consider learning from a learner's point of view. With a commitment to the principles outlined above, we should surely devise a system which would empower people, not catch them in a spider web of rules of combination, prerequisites, artificial choices, closed systems, endless requirements for unit standards and other administrative procedures.

- With the use of learning outcomes and appropriate assessment criteria, the move towards a learner-centered approach - which makes the learners active participants in the process - is very much easier. The performance which will now count is the learner's, not the teacher's.

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[3] Ministry of Education, White Paper on Education and Training, 1995: 26, section 9

- The National Qualifications Framework provides us with a way of recognising that formal qualifications have a special importance in the South African context. They are a major means of entry to better jobs and living standards. Apartheid policies and practices denied qualifications to many South Africans and functioned as an exclusionary mechanism. For the South African qualifications system to be effective, it must achieve universal acceptance.

- The National Qualifications Framework is proposing that a number of more general capacities, such as communication, problem-solving, social interaction and learning-how-to-learn, are essential to the formation of fully rounded learners. These have been called the *learning abilities* in this book. We propose that such capacities are intrinsic to all learning situations, and that standards registered on the National Qualifications Framework will need to reflect the concurrent development of such skills along with the content and skills specific to the field of learning.

In short, the overriding concern of the National Qualifications Framework is to provide a means of formal recognition of each person's progress throughout a lifetime of learning.

An essential aspect of progression is to acknowledge the achievement of defined levels of capability in ways which ensure that the person is capable of entering the next level of learning complexity.

Why should learning abilities be incorporated into all the standards in the National Qualifications Framework?

Learning abilities (or generic competencies) such as problem-solving, decision-making, communication and learning-to-learn are arguably the broadest outcomes of any learning process. These abilities are seen as broader and more complex than subject-specific skills are because they include: the ability to apply a skill to perform a task, a theoretical understanding of the task, the ability to transfer knowledge, skills *and* understanding to other tasks and situations. Learning abilities, while they are acquired in particular learning contexts, are not strictly subject-specific or context-bound. They are seen as underpinning the entire education and training system and cut across subject areas and learning contexts. They act as a common reference point for education and training and provide the bridge that allows for articulation, cross-accreditation and career-pathing. They are intended to exist in all courses so that all learners, no matter what course they follow or in what context, will acquire core learning abilities.

A NEW APPROACH TO QUALIFICATIONS

What do we mean by a qualification?

A qualification has been defined as the "formal recognition of the achievement of the required number and range of credits and such other requirements at specific levels of the National Qualifications Framework as may be determined by the relevant bodies registered such by the South African Qualifications Act"[4].

The new view of a qualification is worth considering. If, in the past, there have been qualifications which have been formed from a number of fragmentary units, supposedly representative of certain bodies of knowledge, then the time for such qualifications has passed. There is a strong feeling that clusters or specific packages of units do not *in themselves* make a qualification. The qualification itself should be viewed as a learning outcome: as an integrated, total performance or overall competence incorporating the individual learning outcomes which have been learned in the process. The learner thus needs to demonstrate that all aspects of the learning process have been internalised, are accessible and are integrated. *Integration of learning is, thus, the ultimate requirement of a qualification.* This principle is a very old and well established one. It became formalised during the middle ages - the craftsman's masterpiece and the doctoral dissertation are both expressions of such integrative learning.

The National Qualifications Framework is specifically aimed at achieving a balance between the "street value" of qualifications and their impact on the twin aims of social redress and economic growth. It does so by describing the purpose and nature of every qualification in a way that is nationally understood and which ensures that the qualification is comparable with its reputable counterparts in other countries. A national qualification recognises learning which has met specific competence criteria and which has been demonstrated through an appropriate combination of capabilities, knowledge and skill at a particular level. In short, a qualification will be awarded when a learner has demonstrated his or her ability to fulfil all the outcomes, and to satisfy any required combinations of outcomes associated with that particular qualification, together with an integrative assessment, at a certain level on the National Qualifications Framework.

It is worth noting again that the achievement of a qualification no longer depends on a learner attending a particular course, but by a learner accumulating credits. These qualifications might

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[4] South African Qualifications Authority Act, 1995: 3

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be achieved by full-time, part-time or distance learning, by work-based learning or by a combination of these, together with the assessment of prior learning and experience.

An important benefit of qualifications, as we have described them, is that it will remove the obsession with institutional learning as the measure of a person's worth, because national qualifications will be blind as to where the learning takes place. This has tremendous implications for access and portability as well as incentives for lifelong learning and the broadening of provision.

How will learners obtain qualifications in future?

A national qualification will define a genuine competence at a particular level on the National Qualifications Framework. The qualification itself will happen through:

- the learner's accumulation of credits for units of learning, where each unit of learning defines a genuine capability. The assessment of units will also allow for recognition of prior learning and experience; and
- an integrative assessment which allows learners or candidates (for recognition of prior learning) to demonstrate their full capability to understand, apply and transfer a range of abilities, knowledge and specific skills. It is the integrative assessment which allows for qualification articulation with recognition of prior learning at a level and not simply in respect of a credit.

The proposed National Qualifications Framework comprises a number of registered units of learning. These units combine to form clusters which - in specified combinations - give learners sufficient credits at a particular level to apply for a full qualification. Once a learner has obtained sufficient credits, she or he can apply for a full qualification, e.g. Adult Basic Education & Training Level 3, General Education Certificate, a Plastics Industry Level 5 or a Bachelor of Science degree. *To obtain the qualification, the learner will undertake a final assessment which establishes whether she or he has integrated all the learning, and whether she or he is able to use it in specific contexts.* Integration and synthesis of the learning which has taken place is, thus, the ultimate competence required for a qualification.

How will credits be combined to make up qualifications?

Individual qualifications will be made up of a number of units for which credits will be awarded. These are called 'unit standards' and are discussed in the very next section.

A question which has challenged all our thinking has been this: "At what point can a combination of units be considered for a national qualification, endorsed by the South African Qualifications Authority?"

In order to answer this question, it will be necessary to develop rules of combination. These will identify:

- the nature of the units which may be included in a particular qualification, including the requirement that the units be registered on the National Qualifications Framework. It would not, for example, be appropriate to include in a nationally accredited qualification, units that are not themselves duly recognised and registered by the South African Qualifications Authority or its agents;
- the means to demonstrate that there is consistency between the stated purpose of a qualification and a particular combination of units within it;
- the categories (for example, fundamental, contextual and specialised) of units that are to be incorporated in a qualification;
- the proportion of units that must be at a specified level on the National Qualifications Framework and, conversely, the conditions under which a qualification may contain a certain number of units at levels above or below the accredited level of the qualification as a whole.

Of course, before candidates can obtain a qualification, they would have to undergo a final integrative assessment. If the candidate is successful, a qualification will be awarded.

What is a unit standard?

A unit of learning is the smallest entity registered and assessed on the National Qualifications Framework. *The unit standard is a statement of the outcomes (knowledge, skills and abilities) that are to be demonstrated by an individual in order to obtain credit for the unit.* The unit standard also describes the performance, range and assessment criteria against which the demonstration of the outcome will be judged.

In other words, the unit standard is outcomes-oriented and is expressed in terms of learner capability: it is not just the conventional "shopping list" of content items found in many existing syllabi.

The unit standard will also need to contain administrative information.

Chapter 7 deals with the unit standard in some detail, and provides some draft examples which make the idea of a unit standard seem much less abstract.

How will existing qualifications be included in the National Qualifications Framework?

Existing awards such as certificates, diplomas or degrees are granted both by public and private institutions, including formal educational institutions (such as universities and technikons), non-governmental organisations, workplace-based training divisions and community-based centres of learning. There is, of course, no shared groundwork between these organisations and institutions which currently ensures uniformity of quality or standard.

If, however, an existing institution wished to seek endorsement of one or more of their awards by the South African Qualifications Authority (or any other accredited body) they may choose from four basic options:

- They can apply to the South African Qualifications Authority (or another accredited body) for endorsement of the existing award at a level to be determined by the South African Qualifications Authority according to National Qualifications Framework criteria. For example, a Bachelor of Commerce degree from one university may be rated by the South African Qualifications Authority as National Qualifications Framework Level 5 whilst a degree with the same title from another university may be rated as National Qualifications Framework Level 4 plus 8 credits towards National Qualifications Framework Level 5.

- They can apply to the South African Qualifications Authority for endorsement of the unchanged award at a specific level proposed by the applicant, for example, National Qualifications Framework Level 5. If the South African Qualifications Authority does not rate the award as proposed, it may provide an alternative rating or return the application for modification.

- They can apply to the South African Qualifications Authority to endorse an award that has been amended to meet National Qualifications Framework requirements *at a level to be determined by the South African Qualifications Authority according to National Qualifications Framework criteria.*

- They can apply to the South African Qualifications Authority to endorse an award that has been amended to meet National Qualifications Framework requirements *at a specific level proposed by the applicant.*

Alternatively, the institution may choose not to seek the South African Qualifications Authority endorsement for an award and to continue to offer it with institutional endorsement only. This does not rule out the possibility of the South African Qualifications Authority's endorsement of some of the unit standards within the award.

How will assessment be carried out?

In order to achieve a qualification, learners must undergo a final, integrative assessment. As regards assessment, the National Qualifications Framework will specify:

- the criteria for and type of assessment appropriate to assess achievement of the unit standard and/or qualification against the nationally agreed standards, and
- the outcomes in a clear and transparent manner so as to enable learners to prepare for assessment through teaching, training and learning.

The assessment of unit standards and the receipt of qualifications by learners will vary. We list three of the possibilities below:

- The teaching and learning process can be tightly coupled with assessment as it is in higher education institutions. At such institutions, assessment against the relevant unit standard(s) is undertaken by the provider. An example of this type of assessment may be a university, which both teaches and assesses students.
- The learning activity may be separate from the assessment: the provider teaches but does not examine. Assessment against the relevant unit standard is performed by a separate agency. An example may be an adult learner who learns at a night school near where he lives, but who goes to a separate examining authority to be assessed.
- While learning may have taken place informally (e.g. on the job), the learner may choose to be assessed by a recognised authority. This type of assessment is referred to as assessment of prior learning. Granting credit on the basis of assessment of prior learning is termed *recognition of prior learning*. An example could be a person who has taught herself to type (ie. has not attended a course) and now wants to have her typing skills formally assessed and accredited.

How will the levels on the National Qualifications Framework work?

In order to achieve portability of learning credits across the system, and progression through it, units of learning will need to be described in ways that can be understood, have currency, and provide coherence across the whole system. A critical part of the organisation of learning into a coherent system is, thus:

- the way in which learning is organised (including the rules of combination of credits for qualifications);
- defining and managing the levels. In order to transfer learning credits between contexts, it will be necessary to ensure that all learning registered at a particular level is equivalent in some way.

It is essential that the way learning is organised facilitates developmental progression for learners, regardless of the particular field of learning they are engaged in.

Current proposals for the National Qualifications Framework are that it should be made up of a set of levels. The notion of levels is, in fact, already familiar as education and training systems have a number of generally recognised levels of achievement. For example, the present matriculation demarcates high school from tertiary education.

The Framework is often represented in broad outline as a table (as shown below). The horizontal divisions of the table are the levels. At present, there are eight levels proposed for the National Qualifications Framework and three sub-levels to accommodate the adult basic education and training levels. (It must be noted that there is still debate around the number of levels[5].)

The table is divided into three main sections: on the left are the proposed levels for the National Qualifications Framework, on the right are the various learning contexts, while the central column suggests the kinds of qualification or award associated with each level. For example, below Level 1, the compulsory school system outcomes that must be satisfied to earn the General Education Certificate will be defined by a set of standards. Similarly, the standards for the fourth level of adult basic education and training (ABET) are also allocated to Level 1. In the range of Levels 2 to 4 there is potentially a larger number of sectors who might provide various forms of integrated education-and-training: senior secondary school, RDP programmes, labour market schemes, industry training and so on.

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[5] Department of Education, White Paper on Education and Training, 1995: 26

The levels of learning on the National Qualifications Framework lay the basis for progression. Each qualification standard and unit standard will be registered at a level, and a common approach to levels of learning could generate coherence across the whole new learning system.

NQF level	Band	Types of Qualifications and Certificates		Locations of Learning for units and qualifications		
8	Higher Education and Training Band	Doctorates Further Research degrees		Tertiary / Research / Professional institutions		
7		Higher Degrees Professional Qualifications		Tertiary / Research / Professional institutions		
6		First Degrees Higher Diplomas		Universities / Technikons / Colleges / Private / Professional institutions		
5		Diplomas, Occupational Certificates		Universities / Technikons / Colleges / Private / Professional institutions / Workplace / etc		
		Further Education and Training Certificate				
4	Further Education and Training Band	School / College / Trade Certificates Mix of units from all		Formal high schools / Private / State schools	Technical/ Community /Police/ Nursing / private colleges	RDP and Labour Market schemes, Industry Training Boards, union, work-place, etc
3		School / College / Trade Certificates Mix of units from all				
2		School / College / Trade Certificates Mix of units from all				
1		**General Education and Training Certificate**				
	General Education and Training Band	Std 7 / Grd 9 (10 years)	ABET Level 4	Formal Schools (Urban / Rural / Farm / Special)	Occupation / Work-based training / RDP / Labour Market schemes / Upliftment programmes / Community programmes	NGOs / Churches / Night schools / ABET programmes / Private providers / Industry Training Boards / unions / work-place, etc
		Std 5 / Grd 7 (8 years)	ABET Level 3			
		Std 3 / Grd 5 (6 years)	ABET Level 2			
		Std 1 / Grd 3 (4 years)	ABET Level 1			
		1 year Reception				

STRUCTURES

What is the South African Qualifications Authority? What will it do?

The South African Qualifications Authority has been conceptualised as comprising a Board of between twenty-two and thirty members appointed by the Ministers of Education and Labour, with a Chairperson, Executive Director and supporting staff established in terms of the South African Qualifications Authority Act.

In terms of the Act, the South African Qualifications Authority has the following essential functions :

- To oversee the development of the National Qualifications Framework in consultation with bodies to be nominated by the Ministers of Education and Labour. The Minister of Education has the executive responsibility for all aspects of the implementation of the National Qualifications Framework;
- To formulate and then publish policies and criteria for the registration of bodies responsible for establishing education and training standards and qualifications;
- To accredit bodies responsible for monitoring the delivery of standards and to audit achievements in terms of such standards and/or qualifications.

What is a National Standards Body and what will it do?

A number of National Standards Bodies will be established by agreement with the South African Qualifications Authority. Each National Standards Body will recommend qualification standards and write and review unit standards for its field of learning. Demarcating the fields of learning will be one of the first major tasks for South African Qualifications Authority and one which will need to be addressed early on.

The broad composition of a National Standards Body should include everyone with a legitimate interest in the standards being generated. Given the difficulty of making such a requirement practical, it is likely that nationally organised interest groups will be favoured. Those that do not actually sit on the coordinating structure of a National Standards Body will have an automatic right to view and comment on standards generated - both within the generation phase as well as during the comment phase when draft standards are made public.

What is an Education and Training Qualifications Authority and what will it do?

The setting of standards and the establishment of some meaningful qualification's framework is futile unless the society at large is sure that agreements reached are in fact being implemented. The credibility of credits and certificates is entirely dependent on this assurance. The principal role of each Education and Training Qualification Authority is to ensure the maintenance of quality.

Broadly, the current proposals leave Education and Training Qualification Authorities at the point of "monitoring and auditing achievements."[6] From the proposals it would appear that a body would be required to demonstrate the following in order to be accredited as an Education and Training Qualifications Authority: competency in the area, capacity to carry out accreditation, and the ability to be sufficiently representative for the constituency that it serves.

It seems clear that the boundaries for Education and Training Qualification Authorities will not simply be those of a corresponding National Standards Body. In fact, there will probably be a larger number of Education and Training Qualification Authorities than of National Standards Bodies. The boundaries will only be settled once South African Qualifications Authority has ruled on the matter. However, there appears to be agreement on at least two "categories" for Education and Training Qualification Authorities :

- Provincial authorities for schools and, perhaps, adult basic education;
- Sectoral bodies such as industry training boards, in collaboration, especially at the higher levels, with the relevant professional bodies and, at the lower levels, with the provincial authorities for adult basic education and training.

Education and Training Qualification Authorities fulfil one, two or three of the following important functions:

- In all cases, Education and Training Qualification Authorities verify that the assessment of learners is carried out in terms of the standards drawn up by the National Standards Bodies;
- In addition, where multiple examining authorities assess against the same standards, the moderators will carry out a moderation function which ensures that assessment is fair and consistent across all examining bodies. Education

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[6] South African Qualifications Authority Act, 1995. 6

and Training Qualifications Authorities may act as moderators or may themselves be subject to moderation;

- Education and Training Qualification Authorities may accredit individual providers to deliver quality learning which leads to assessment against the registered national standards; and
- at the higher education and training levels, individual providers may be accredited as Education and Training Qualifications Authorities and carry out all three functions, subject to some form of external moderation arrangements.

How do all the structures work together?

We have looked at the National Qualifications Framework itself and the entities that will enable its successful operation. It is useful to summarise their functions as follows:

- The National Qualifications Framework is the facilitating mechanism for achieving a coherent system of education and training and for publicly registering qualifications and unit standards;
- National Standards Bodies are competent and representative organisations which recommend qualifications and set unit standards at credible levels;
- Education and Training Qualification Authorities ensure that assessment is carried out in accordance with the standards as they have been defined by the National Standards Bodies; that various assessors carry out their evaluation of learners consistently and fairly; and that individual providers of education and training deliver quality learning; and
- The South African Qualifications Authority ensures that the National Qualifications Framework is maintained, that the National Standards Bodies and the Education and Training Qualification Authorities are competent to perform their respective tasks, and that they do so as part of on an ongoing process.

The National Qualifications Framework and its attendant structures are thus responsible for developing and implementing nationally accepted standards and ensuring that they are met.

CHAPTER 2

WHO WILL BENEFIT?

There is little point in developing a detailed national framework unless it can clearly be shown that people and groups will derive benefit from it. In this section we give some examples of how the National Qualifications Framework can benefit different people and groups. The examples are intended to show how some of the more abstract concepts will translate in practice.

The National Qualifications Framework will benefit and work for the following people and groups in the following ways:

An individual school-going learner

Sipho is a township high school student. Over the years he has had to leave school at various points to help out at home, but he returns to carry on studying whenever he can.

Sipho could complete his Further Education Certificate by accumulating credits. The prescribed set of credits could be obtained either at school or informally, for example through community learning centres. Because unit standards will be expressed as learning outcomes, Sipho will have a clear idea of what he has to achieve in order to gain a credit. Since the credits are obtained at a particular level on a national framework, Sipho can be assured that his qualification will be equal to any other at that level no matter where it was obtained.

A person of school-going age, but who is not in school

Jonah is a 12-year old who has never been to school, but who has become aware of the value of learning. He has some "street learning".

When Jonah returns to school he will be assessed against the standards and his prior learning will be determined and used to place him at an appropriate level. After that, a suitable learning pathway could be mapped out with him, and he could choose an institution at which to pursue his learning. It is likely that Jonah will be more mature than his peers, so he may be able to race through some units. The unit standards would encourage an open learning system which would allow a person multiple entry points, assessment when the person feels "ready" and a qualification which has the same value as any other at that level.

An adult learner

Grace is 25 years old, and is unemployed. She has had odd piece-work jobs, but would like to study so as to develop a career.

Grace can be assisted to map out a learning pathway which would, say, lead toward a qualification in child care. This process would include identifying suitable education and training providers which cater for adult learners.

Once Grace approaches a provider, her prior experience and learning can be assessed against the requirements of the individual unit standards. She can then embark on a learning programme which leads in a direct way to a career of her choice rather than first having to complete a matric.

A worker

John has worked for the same large plastics manufacturer for years, and has been sent on courses run by different providers. He has sometimes received certificates from these courses, but when applying for other jobs, has been told that the certificates are not recognised.

An important benefit of the new approach for workers is that National Qualifications Framework credits will be nationally recognised and portable. With his recognised credits, John can progress in his current career path or acquire additional credits to become fitted for a new job.

An under-qualified school teacher

Busi is a high school teacher in a rural area. She has been teaching for fifteen years, but has only a Standard 8 and a two-year teaching diploma, so her salary is low. She also finds that she has an inadequate background to deal with the subjects she has to teach. She would like to study further, but would find it impossible to stop working for the time it would take her to get a 'matric'.

In the past, Busi has been unable to upgrade her professional qualifications. With the National Qualifications Framework, Busi will be able to gain credit for all the learning she has acquired while teaching. Busi can apply to be assessed at an appropriate institution where she may well be awarded the equivalent of matric. Then she can enter a distance education programme to upgrade her teaching qualification. With the equivalent of matric and a teaching diploma, Busi's prospects of a higher salary and a promotion will greatly improve. She will also have gained greater confidence in her teacning abilities and broadened her knowledge of teaching and learning strategies and so be better equipped to assist in the development of her pupils.

A training officer and learning facilitator

Joan, a trainer for a national company, develops her own courses. She wants to ensure that the training she does is relevant both to the company's needs, but also addresses the needs that learners have for formally recognised qualifications.

The unit standards provide Joan with clearly identifiable learning goals and are written in such a way that they are general enough for her to apply to her specific situation. The qualifications structure allows her to design her courses so that they serve as components for a nationally recognised qualification. She can therefore structure her course to provide for both the needs of her learners and of her company.

An employer

The Hands On Company has a fairly high staff turnover and Jim, the MD, feels that part of the reason for this is that the education qualifications do not prepare people adequately for the work environment. Taking on school-leavers with a matric is a lottery. Some of them can barely read or write, others have enormously high expectations, while still others feel that the work is beneath them.

Because the unit standards require performance beyond mere recall of information, they enable an employer to assess a person's capabilities, and not just their paper qualifications. The range of units and the level to which they are performed make it possible for Jim more easily to match the job requirements to the level, interests and aptitude of the work seekers. Jim could, in addition, recognise gaps in the person's palette of abilities and provide on-the-job training to address those gaps. So, while Jim achieves a competent and more stable workforce, the workers can extend their qualifications.

Members of a community-based project

A group in the Mahlabe district have a small project which produces and sells woven, carved curios and clay-based artefacts. They have very little schooling, but have picked up the rudiments of running a business through their activities and the advice of a development agency.

The skills and knowledge that this group have acquired during the life of their project would be assessed against unit standards which deal with such skills as engineering, retail and marketing, and business administration skills.

From the set of National Qualifications Framework standards, the people in the group can then select one set that is appropriate to their needs. Each person in the group would require units which suited his or her activity. Through the development agency, they could gain access to distance education institutions and, ultimately, could gain meaningful qualifications.

The National Qualifications Framework will also benefit the following:

- *Government*

The National Qualifications Framework could pull the whole country together, ensuring that learning serves the interests of the broader community and the development goals set by the government. Institutions and departments involved in education and training could be encouraged to focus on learning that is relevant to the needs of the people and the country. In addition, the problems of access to education can be addressed by allowing for an open learning system that acknowledges that learning does not happen only in the classroom. "Informal" learning which happens during other activities can also be harnessed.

- *An industry training board*

Each industry can apply the generic outcome statements in a unit standard to their particular industry, without having to create a new qualification. For instance, all manufacturing industries could have a common structure, even though they are focussed on the particular materials and process found in the various sub-sectors. On-the-job training and formal education and development programmes can all be incorporated into a coherent, flexible system. The industry can adapt to the changing technological and economic environment more quickly and easily.

- *A learning institution*

All qualifications would have assessable outcomes which would ensure that no matter where the qualification was obtained, the outcomes would be equivalent. The transfer of credits between institutions would be simplified for learners.

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Institutions that are struggling to meet the requirements of the framework, perhaps because they were historically disadvantaged, could be identified and given support in order to gain accreditation.

Because the unit standards would be expressed in generic terms, learning institutions could still retain their identity and their unique offerings, and could expand the standards in their specialisations.

- *A profession*

A profession frequently requires both academic qualifications and professional competence. An outcomes-based qualifications system would allow the profession to assess, modify, update and refresh their own qualifications system more easily. It would allow them to accommodate different categories or sub-professions more easily but also it would allow them to define alternative routes to the qualification. Multiple access points, various articulation possibilities and providing institutions with curriculum guidelines would allow the profession to grow more quickly without compromising the quality of such qualifications.

CHAPTER 3

SOME CRITICISMS

A new system is often met with scepticism, fear and criticism and the National Qualifications Framework is no exception. In this section, we present some of the more common criticims and provide a comment on each of them.

1. *"The National Qualifications Framework imposes a single viewpoint on all education and training."*

   The National Qualifications Framework, in its commitment to the idea of nationally valued standards, certainly seeks to propose a single, unified system for education and training. However, the creation of qualifications and the unit standards within them is seen to happen through consensus-building among relevant stakeholders within a field of learning. Thus, the nationally agreed standards will really reflect the values, knowledge, skills and insights of a nationally credible working group in that particular field of learning.

2. *"The National Qualifications Framework is a system to introduce standardised curricula for all levels and learners."*

   The National Qualifications Framework is an attempt to bring coherence to education and training while building in the greatest amount of flexibility possible. Thus, while qualifications and the unit standards within them will be determined through a nationally credible process, actual curricula and programmes for delivery will be the domain of the authority, institution and educator to develop. The national standards will be expressed only as outcomes. This encourages maximum flexibility and creativity - the hallmarks of professionalism in education and training.

3. *"The National Qualifications Framework is a way of lowering standards by forcing the 'vocationalisation' of education."*

   The present proposals for the National Qualifications Framework will certainly do away with some aspects of current education and training practices. For example, rote learning and task-specific training. However, the unifying vision in the present proposals is for the development of quality learning which is demonstrable, as performance, in a particular context. This context could have a strong vocational quality. Equally, it could be an advanced academic context. A look at Chapter 5 will help readers to understand the 'thick, rich' way in which *performance* can come to be understood.

4. *"The approach of the National Qualifications Framework may bring chaos through the ad hoc selection of unrelated bits of learning to make up qualifications."*

   The Framework aims to achieve coherence and integration across units and qualifications. Also, the stakeholders themselves will be able to give input about how qualifications should be made up, thus the selection of learning units is not likely to be random. Furthermore, for each and every qualification, there will be an integrative assessment across all the capabilities that have to be developed within qualifications.

5. *"The National Qualifications Framework could end up as a nightmare of bureaucratic red-tape."*

   The body that will administer the National Qualifications Framework, namely the South African Qualifications Authority, is envisaged as a Board of not less than twenty-two and not more than thirty representatives of nationally significant stakeholders. National Standards Bodies, it is proposed, will be established at the 'highest level' of generality and will also consist of representatives of national stakeholders. How Education and Training Qualifications Authorities will be established is yet to be determined. There are bureaucratic pitfalls in every system design. However, with sufficient will and determination to maintain the principles which underpin the proposals for the National Qualifications Framework - chiefly, inegration, coherence, flexibility and *learner*-centredness - it is hoped that the system will be streamlined rather than top-heavy and labyrinth-like. The main intention is to ensure that the South African Qualifications Authority facilitates the implementation of the National Qualifications Framework and adds value to the standard-setting and quality assurance activities of stakeholders.

6. *"The National Qualifications Framework could devalue the standard of learning to the lowest common denominator in the field."*

   On the contrary, the National Qualifications Framework is a system that, through consensus and based on a true understanding of levels, aims to raise the status of qualifications to realistic, nationally credible levels where this is not already the case.

Important principles are quality, national credibility and international comparability of qualifications.

7. *"The National Qualifications Framework is a plot by labour to collapse the difference between mental and manual labour."*

The debate that led up to the National Qualifications Framework recognised that the distinction between mental work (linked with education) and manual work (linked with training) is strongly established, but inappropriate. Conditions in the new labour market are vastly different from those of the past. The emergence of new technology and new forms of work organisation demands a labour force with higher and more flexible skills. Workers with poor basic education skills are ill-equipped for such change. Therefore, far from being a labour plot, the proposed framework is seen as having benefits for both education and the workplace. Both of which, in turn, are presumed to have a positive interactive relationship with productivity and the health of the economy.

8. *"The National Qualifications Framework could rob any institutional sector of its identity or 'academic freedom'."*

The National Qualifications Framework certainly aims to open up access and provision to all learners who can demonstrably meet agreed national standards. While such standards will be stated as the outcomes of learning, *they will not prescribe the process of learning*. Institutions will not only be instrumental in creating appropriate unit standards for their contexts, but will have freedom to innovate in term of the delivery of learning for those standards.

9. *"The National Qualifications Framework will be a straitjacket to force all qualifications to look the same."*

Diversity is recognised as strength. However, learners, teachers and employers all need to know what the commonly agreed outcomes are for a particular qualification, for example, a national diploma in mechanical engineering. Nevertheless, a particular institution offering a programme leading to this qualification will continue to offer a range of choices. They will certainly continue to impart an individual institutional emphasis through the particular delivery approach they adopt.

10. *"The National Qualifications Framework is another 'good' idea invented by government which provides the opportunity for countless scams and the exploitation of learners and their parents."*

The National Qualifications Framework attempts to give a coherent rationale for acceptable standards across levels and contexts. The existence of such standards makes it possible to assess the quality of provision, and rid the system of "fly-by-night" providers.

11. *"The National Qualifications Framework is a means of devaluing formal education and training."*

The Framework certainly will provide a means for recognising that learning takes place in various places and at various times, and will provide a mechanism for measuring and rewarding such learning.

While the National Qualifications Framework endeavours to overcome the present system's inability to deal with informal learning, it will in no way diminish the value of formal education and training. In fact, by making it more reasonable to aspire to - and access - learning opportunities, the National Qualifications Framework will attach a greater value to learning than has previously existed.

12. *"The invention of national qualifications means that only the government will issue qualifications."*

The term "national qualification" actually means a nationally recognised qualification, not one issued by the government. Qualifications will continue to be issued by various authorities and providers which have been accredited to do so by the relevant Education and Training Qualifications Authorities under guidelines determined for them by the South African Qualifications Authority.

13. *"Quality assurance is another term for 'thought policing'."*

The purpose of quality assurance is to enhance the quality of learning to the benefit of learners, their employability in a competitive economy, and participation in learning and in society. This result is possible only if people from relevant stakeholder groups participate in the standards-setting, quality assurance, assessment and provision processes.

14. *"The National Qualifications Framework is not relevant to higher education, especially to the universities who are concerned with generating new knowledge and not just transmitting existing knowledge."*

Firstly, universities do in fact transmit a vast body of existing knowledge as well as generate new knowledge. The envisaged implementation of the National Qualifications Framework, however, is concerned with more than just the transfer of knowledge: the development of important abilities such as problem-solving and communication is equally essential. This is true throughout all levels of the Framework. It is understood, especially in higher education, that much generation of new knowledge occurs in higher degree studies, and the Framework is capable of accommodating all existing criteria for masters and PhD degrees as statements of the agreed outcomes of those degrees.

CHAPTER 4

APPROACHING "INTEGRATION"

This chapter briefly describes the policy processes in which this book is located and some of the different interests involved in the debate about integrating education and training.

The proposals contained in this book follow from the National Training Board negotiation process which led to the publication of a Discussion Document: *A National Training Strategy Initiative* (1994). However, policy development is not a smooth process which occurs between like-minded people or groups. What, then, were the different views which contributed to the various policy proposals on integrating education and training?

During the discussions which led to the *National Training Strategy Initiative*, four stakeholder groupings - the state, employers, labour and education and training providers - were locked in battle over many issues. Even in the subsequent process which has produced the work presented in this book, the participants were not always in easy agreement - despite the interest and enthusiasm which provided the momentum for many hours of voluntary effort. We contributed as individuals and thus without mandates from our constituencies, but we were by no means neutral. We came with mind sets that were informed by our own life experiences, our work contexts and our need to influence the proposals as much as possible in favour of the needs of our own learner groups and institutional settings.

It is important to grasp differences of opinion that lie behind arguments for an "integrated approach" for when temporary consensus is reached in any negotiation process, it does not mean that differences miraculously disappear. Some stakeholders often decide to "sit on the fence" for a while; some continue to push for interpretations or meanings that are congruent with their needs and interests; others withdraw and move to negotiation forums which better serve their purposes. The point is that a major transformation such as the proposed National Qualifications Framework has, and should have, both proponents and critics. It would be naive and even unhealthy to pretend that an "integrated approach" is not a contested proposal. However, acknowledgment of such contestation should also not stop us from attempting to develop concepts and structures that could facilitate long-term consensus policy development.

Many policy documents attempt to put forward powerful, persuasive arguments which present their underlying concepts, processes and terms as uncontested and self-evident. This obscures the untidy nature of the conceptual work that precedes the final version of any public document. In this book we hope to share some of the processes and thinking that led to the proposals being made here.

Part 1 of this book outlined some of the arguments in favour of an integrated approach to education and training. In this Chapter we take one step back in order to trace the positions put forward by national stakeholders as well as by curriculum developers and providers during the discussions that preceded the work undertaken by this group.

Who initiated "integration" ?

During the period 1989 - 1994, there were a number of groupings who began exploring ways in which the South African education and training system could be transformed. They include the work done by NUMSA and COSATU in 1989; the National Educational Policy Investigation (NEPI) in 1992; the work conducted under the auspices of the National Training Board (from 1993); the PRISEC work (1993); the ANC Draft Policy for Education and Training (1994); and the subsequent reports produced by the Implementation Plan for Education and Training (IPET) working groups under the auspices of the Centre for Education Policy Development (1994). There were also a range of policy proposals put forward by various national and regional sector groupings.

The National Training Board process began in 1993, a few months before the first election for a Government of National Unity. Not surprisingly, its initial debates were located within a training (or vocational) context. However, by the time its recommendations were published in the *Discussion Document on a National Training Strategy Initiative (NTSI)* in April 1994, much of the value lay in the way in which the national scope of the debate had been influenced through an extended range of stakeholders. One could almost say that it was the timing - just before the first national elections - that made this process influential and, indeed, possible.

Four stakeholder groupings had entered the National Training Board process with concerns closely related to the needs and conditions of their constituencies. Two of the four, employers and labour, were used to bargaining against each other in an industrial relations framework. The other two were new to this type of engagement.

- Given the particular moment in the history of our country, the *state* grouping was a rather complex configuration. The official state representatives represented two departments from the "old" state - Education and Labour (called the Department of 'Manpower' at the time). The two departments came out of a deeply divided system in which they literally never spoke to each other. Even in respect of apprenticeship training, the Education Department designed a theory component independently of the practical training designed under the Department of Manpower. The two departments often united in their desire to resist integration.

The "new" or "shadow" state representatives came in under the ANC-COSATU alliance. The latter grouping therefore did not officially represent the state, yet their concerns (many of which were shared by the official state representatives), dominated the agenda. In a nutshell, their view was that any new education and training strategy should address the concerns of economic reconstruction and growth, should lead to active labour market policies and should address past injustices and inequities in domains of learning.

- *Employers* shared the concern about economic growth and highlighted the issue of global competitiveness. They placed particular emphasis on the need to improve productivity through worker training.

- *Labour* concerns (driven by COSATU representatives) revolved around the need for employment security and employment growth for their members, as well as the need for progression or career paths that would be opened up by access to education, training and development opportunities. They strongly articulated a need for the provision of Adult Basic Education as an integral part of formal or accredited learning.

- *Providers* were concerned about the fragmented systems of learning that prevented the possibility of continuous learning pathways; the curriculum shifts that would be required and the competence of the people currently teaching or instructing learners.

These four sets of concerns interacted in both complementary and contradictory ways. They shifted the debate from a concern about *vocational training* to a broader conception of *vocational education and training* and then to the argument for an *integrated approach* to all activities and systems currently classified as *education and training*. The definition of "integrated approach" was deferred, with some participants hoping to see full integration (as a seamless spectrum from general to applied learning) and others anticipating separate education and training tracks lying side by side under a common umbrella.

The proposed National Qualifications Framework, based on the twelve principles outlined in Chapter 1, constitutes the integrating and regulatory mechanism that will bring cohesion to current learning systems and practices and simultaneously transform these systems and practices.

The challenge of finding consensus between trainers and educationists

A fascinating feature of the National Training Board process concerns those issues which were *not* initially contested between the participants. One of these was the use of *competencies* as basic building blocks in the National Qualifications Framework. For many of us this consensus was puzzling, given the proliferation of meanings and methodologies attached to this term.

Although the term "competence" was familiar to the *training-minded* participants, the notion of competence having an educational dimension was unknown to most people from the training sector. They were concerned that, given the institutional power of the formal education providers, "competence" might become too theoretical or academic, and not reflect sufficiently the measurable demonstration of performance standards in explicit behavioural terms.

The *education-minded* participants, on the other hand, were immediately concerned about the power issue of "whose standards would be used to determine competence?" They feared that if education were to become the handmaiden of the economy, loss of curriculum autonomy would result. They would thus lose the opportunity to prepare individuals for social, cultural, intellectual, political as well as economic roles in a democratic society.

The subsequent adoption of the internationally-popular and more generic term *outcomes-based* did little to dispel fears on both sides. For many educationists the discourse remains "technicist" and training-orientated. For many trainers, known methodologies of curriculum design such as behavioural objectives or criterion-referenced approaches are suddenly in dispute, although some remain convinced that the term is simply a case of "old wine in new bottles".

While the positions outlined above may, at one level, be seen as institutions and occupational groupings defending their "turf", there is a further explanation which is clearly articulated by Christie (1995). She explores the importance of local differences in implementing global trends and "policy-borrowing". Referring to the contestation around the competency agenda she states:

> *Most of the policy proposals in the White Paper, including outcomes-based approach to curriculum and assessment, are merely fields mapped for play in a very uncertain game. And if global policy outlines can be easily transferred*

> *from context to context, it is surely the case that the struggles of implementation are a wholly local matter.*[7]

When one examines the stances various stakeholders adopt to the National Qualifications Framework, it becomes clear that apparent interim consensus hides the contestation that surrounds the conceptual nuts and bolts required to develop a new system in practical terms. It is usual for policy developers to seek advice and guidance from the work done in other countries, but no policy, no matter how carefully developed, can be imported and implemented directly. Local contexts and conditions may be far removed from those existing in the countries in which policies originated. Local research, development, debate and contestation are therefore crucial ingredients of policy work.

In this book you see us searching for concepts and terms that will be acceptable to both the education and training sectors. We have indeed "borrowed" internationally, but we have also worked hard to formulate local meanings that create pathways for discussion and debate across different contexts.

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[7] Christie, P. *Global Trends in Local Contexts: A South African Perspective on Competency Debates*, University of the Witwatersrand, 1995: 13.

CHAPTER 5

WAYS OF LOOKING AT PERFORMANCE

How do we understand the notion of competent performance in real life? How do we understand it in the learning world? This chapter explores how one might view the transfer of learning in different contexts and how learners might progress.

In this Chapter we describe the shifts in our own thinking that led us to adopt the concepts and terms put forward in this book. We dropped the term "competencies" and "skills" as they are controversial and ambiguous. We retained "competence" as the description of overall proficiency and adopted the term "capability" as the learning outcome.

What is competent performance?

A competence-based approach to learning is usually associated with explicit and measurable behaviour according to pre-set performance standards. Any performance which cannot be directly observed or assessed in a measurable way falls outside this narrow interpretation of competence. It follows that thinking or mental performance which can never be directly observed, falls outside such an interpretation of competence.

People who plan or control the performances of others often argue that performance should be equated with skill or with that which is done using one's hands. They do not acknowledge that which happens in the head and the heart because these aspects of performance are not observable or measurable. They argue that one should be able to list and describe the activities that constitute competent performance precisely and exactly.

Yet, even the staunchest supporters of this position have been forced to acknowledge that standard production-line work organisation is changing and that the understanding of competence based on this type of work organisation is obsolete. Contexts and conditions of performance can no longer be predicted and stipulated precisely and accurately. *Flexibility* thus becomes a key capacity for all levels of workers and managers, as well as for general citizenship.

A glance at one of the international job competence models shows that competence is now being viewed as requiring high degrees of discretion and autonomy. Four components of competence are distinguished:

- *Task skills* are those skills used routinely in activities which are well-defined and have a conclusion and an outcome which is usually discernible;

- *Task management skills* are the skills exercised in combining the different tasks of a job, scheduling, dealing with the variability in demands of different tasks, dealing with responsibilities which intrude on routine tasks;

- *Contingency management skills* are used to deal with events which are liable to occur, but which are unpredictable or novel. Contingencies include things going wrong as well as plans and expectations being changed by external factors;

- *Skills of dealing with role/job environment* are to do with mediating between tasks to be carried out and the natural and artificial constraints placed on the role or job. They include the skills of working with other workers and with people from outside the work organisation. They are equally to do with the physical environment of the occupation and with the demands or standards which are imposed - time, safety, cost and so on.[8]

This four-part description of competence contains implicit assumptions about change and therefore about situations of uncertainty or unpredictability. It emphasises priority and risk assessment, autonomous judgement and flexibility in decision-making. It calls for the development of a broader and deeper "reading" of the context in order to anticipate and deal with the "out of the ordinary" and poses learning as an ongoing of lifelong activity. Types of knowledge and understanding not solely related to immediate performance also emerge as a crucial requirement for competence.

We started our exploration of competence by asking an old question in a new way: ***What counts as performance?*** Some of us were thinking about performance in work or application contexts, while others were thinking about the ways in which we learn to perform, including in traditional educational contexts. We did not want to perpetuate the old divisions of practice versus theory, or "ivory tower" versus workplace, so we searched for a common base from which to start our work. Our route took us on a round-about journey which can be outlined as follows:

- What counts as expert performance?
- Levels of progression

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[8] Mansfield, B and Mathews, B, *Job Competence: A description for use in vocational education and training*, Blagdon: Further Education Staff College, 1985

- Learning to perform competently
- What makes transfer possible?
- Performance in relation to qualifications.

Below we put forward the thinking and agreements that we reached.

What counts as expert performance?

When one tries to visualise or describe competent or "expert" performance, one invariably tries to think of the best performers that one has encountered in the area under discussion.

Our thinking about expert performance started with a commonly-shared assumption that "*I act upon the world as I see or understand the world*". Expert action or performance is thus a simultaneous demonstration of a whole range of human dimensions. In traditional depictions of performance these dimensions are usually viewed as discrete units or compartments and can be broken up into:

Knowledge + Understanding + Skills + Values/Attitudes[9]
= Performance

The assumption is that the units operate independently from one another and can be acquired separately. The separation between conceiving a task and performing a task (often referred to as Taylorism or the head/hand divide) is based on this assumption. This assumption also frequently excludes task management skills, contingency management skills and the skills of dealing with a particular role or job environment.

We argued differently. Our understanding of performance is not that each component is separate, but that all components are integrated into a whole. This is how we see it:

1. *What we know* depends on *how we think about* or *process* information (abilities relating to problem-posing, analysis and synthesis). This, we said, equals *knowledge*.

   Knowledge is part of *performance* and it is not value-free. It is internalised understanding that a person brings to bear on a particular situation or activity. *Understanding* is thus not separate from knowledge - it is *knowledge*. Put in another way: knowledge is information, theory, arguments or concepts that have been contextualised within our own particular mental and affective or emotional structures. When these structures are similar to those of others we view ourselves as "like-minded"; and where they differ we find other people "illogical" or "stupid".

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[9] It should be noted that the concept of *Values/Attitudes* is the most controversial of all these concepts.

2. The construction of knowledge occurs within particular *value orientations or frameworks*. Values are part of *performance* since they determine the ways in which we process information mentally and emotionally. Some people, for instance, view animals in the same way as they view humans and see cruelty to animals as an injustice which should be punished by law. Others think that animals are not the same as people and that inhumane treatment is not an issue. A difference in values therefore leads to a different kind of thinking.

3. Performance actions or utterances may be verbal or in writing, or they may involve using a tool such as a sculptor's chisel, a motor mechanic's spanner, a surgeon's scalpel, a word processor, a soccer ball or a hairdresser's cutting scissors. We also use our own hands as tools when we, for example, knead dough or touch a person or animal. *The manipulation of tools and the manual dexterity required to do so* are thus parts of performance, but in themselves they do not constitute performance. They depend on the mental and emotional dimensions of performance for meaning and expression.

Having got to a "thick" or integrated understanding of performance we added a further layer:

4. Performance does not occur in a vacuum or - more poetically stated - "no person is an island". *People act with or in relation to other people*. The *communicative or interactive dimension* of performance provides one of the standards against which such performance is judged. For example, we judge a communication not only by what the person is communicating, but also by *how* this is being done.

   This includes an assessment of language usage, the ability to express or present our communication clearly (whether verbally or in writing), as well as *gestural* aspects (often referred to as body language). The term "gestural" is, however, broader than just body language. It includes our conscious or unconscious decisions about spatial proximities (for instance how far or how close we want to stand, sit or sleep to others), our tone of voice, the style of our writing. Our

> decisions (made consciously or unconsciously) refer to our "reading" or interpretation of the *power and authority* dimensions in a particular situation. If we think that a certain person is powerful we may, for instance, show respect in a number of ways. We may show disdain for another person who, although powerful, does not share our world view.
>
> Communicative and interactive ability is an integral part of performance.

The conclusion that we reached at this point was to understand that when we observe human action we are - to use a metaphor - only seeing the tip of the iceberg. The myriad of conscious and unconscious mental and emotional judgements and decisions that inform or direct any particular action (or sequence of actions) are "under the surface" like the rest of the iceberg.

To summarise:

- *Information or content* interpreted within a *particular value orientation* through employing *particular mental* abilities such as problem-posing, problem-solving and judgement or decision-making *abilities,* is the invisible part or basis of performance (or, to return to our metaphor, the base of the iceberg which is under the water)[10].
- The visible part of performance (the tip of the iceberg) includes the *manipulation of 'tools' and manual dexterity* and occurs within a *communicative or interactive context*, which includes *gesture*.[11]

We hope that we have succeeded in showing how we moved away from the traditional *Knowledge + Understanding + Skills + Values/ Attitudes = Performance* equation to an understanding that all these components are *integral* to performance. By "integral" we mean that they operate together in performance. *They are undivided and indivisible.* The reason why they are often divided into discrete units is because it is easier to teach them this way, not because they are acquired in this way or because they operate in this way. In the past, different institutions have emphasised different components of performance. However, an integrated approach would suggest that we should recognise all of the components across the whole system.

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[10] You will note that we use the word "particular" twice in this sentence. We refer to *particular* value orientations to show that they are not universal. They are common to a grouping, which may be a social class, an occupation or profession, an organisation, a community, a family. At certain points our value orientations intersect with those of other groupings or individuals and at other points they diverge.

Mental or cognitive abilities are also not universal or generic. They are acquired in the activities that relate to a *particular* task, field or discipline of thinking and its related content matter. One learns to think like a trench digger through digging trenches just as one learns to think in a legalistic way within the discipline of law.

In addition, there is an individual or personal dimension which makes the particular even more particular!

[11] Our use of the term "gestural" allowed us to tackle the prickly issue of *attitudes*. We often talk about somebody having a positive or a negative attitude - when they express a value orientation that is in line with our own, or one that is opposing or contradictory. Our value orientations are often expressed by the "gestural" rather than being directly stated.

In order to convey our understanding of "expert" performance as the expression of generic abilities as they relate to specific content areas, contexts[12] and value frameworks, we decided to adopt the term *capability*. A person demonstrates *competence* when she or he integrates a range of capabilities in continuous activity.

"Capability" as the basic enabler of performance can be visualised as follows:

CONTENT / INFORMATION

plus use of

CONCEPTUAL PROBLEM-POSING AND PROBLEM-SOLVING ABILITIES
TOOL USAGE AND DEXTERITY ABILITIES
COMMUNICATION AND SOCIAL INTERACTION ABILITIES
(the context determines how these are described
and each will be informed by a value framework)

equals

CAPABILITY

The consequence of such conceptual understanding is that it erases the old head/hand divide. It explicitly acknowledges the affective or emotional - not as "illogical", but as powerful in its impact on the thinking process. Furthermore, it poses performance within a communicative or interactive context - as we must when we refer to the performance of human beings rather than to the performance of robots or computers.

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[12] Different contexts require contingency skills, task management skills as well as interaction with others.

We further understood that *contexts in which capabilities are expressed* contain a wide range of variables or combinations. The range of situations may vary

- from performing a single activity in familiar and predictable contexts, to performing a single activity in unfamiliar and unpredictable contexts; or
- from performing multiple activities in familiar and, therefore, predictable contexts to performing multiple activities in unfamiliar and unpredictable contexts.

We decided to call these combinations *contextual* or *range indicators*[13].

Levels of progression

Since we knew that a progression mechanism would have to be developed to drive the different National Qualifications Framework levels, we used our new understanding of expert performance in different contexts to attempt to find level descriptors.

At first we tried to describe different contexts from simple to more complex. We took one ability and tried to describe its use across the different contexts over eight levels. The problem was that we ended up with a matrix full of decontextualised words which have limited meaning for specific fields of learning.

The example below illustrates the point. Taking problem-solving as the "ability", we ended up with the following matrix:

Level 8	Influencing the global, social, political, economic environment in a wide range of unpredictable situations
Level 7	Developing the economic, political and social environment so as to exercise influence in a variety of situations
Level 6	Development of various processes in relation to the external environment in a wide range of specialised and changing areas and circumstances
Level 5	Considering new processes required and existing processes not required any more in a wide range of specialised areas and circumstances

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[13] The term 'range indicator' may sound familiar to those of you who are acquainted with the term 'range variable' in the British NVQ system, but you should not automatically transfer the meaning which the term holds in Britain.

Level 4	Solving problems related to a range of processes in a significant range of familiar and unfamiliar circumstances
Level 3	Solving problems related to a single process in a significant range of circumstances offering a clear choice of routine responses
Level 2	Solving problems related to a range of activities in a moderate range of familiar situations
Level 1	Solving problems related to a single activity in a limited range of familiar situations

We made a further attempt, informed by looking at problem-solving in the workplace, but this achieved something that was even more problematic. It resulted in a Taylorist division between the various components of an ability.

The example below also uses problem-solving as the "ability" and illustrates the difficulties inherent in this approach:

Level 8	By this level, we had run out of "bits" of problem-solving ability!
Level 7	Expand the range of problem-solving and problem-posing contexts to high levels of unpredictability and a wide span of influence or impact
Level 6	Critically evaluate the results or consequences of solutions
Level 5	Test proposed solutions through real and imaginary action
Level 4	Make decisions about most appropriate responses or solutions to problems, including an examination of values or other criteria against which to judge solutions
Level 3	Generate solutions to problems and hypotheses or reason about the consequences of each proposed solution
Level 2	Access and gather data that enables the investigation and examination of the underlying causes of a problem, from a variety of perspectives
Level 1	Recognise and describe problems as they relate to the field of study or sector

If we had accepted this matrix learners would have had to reach at least Level 6 on the National Qualifications Framework before being able to identify and solve a problem in its entirety!

Neither of these examples illustrates the intention of the National Qualifications Framework, but we include them to show how easy it is to get trapped into this kind of matrix-thinking. Even when one tries to express contextual or range indicators along a continuum of complexity, one still ends up with stilted and unquantifiable descriptions. *Contextual or range indicators should rather offer concrete descriptions of the contexts to* *which capabilities relate and, within a particular field of learning, indicate the purposes, occupations or jobs for which the capabilities are required.*

We concluded that it is not useful to begin by developing a set of prescriptive level indicators. Through work done in pilot projects in different sectors and fields of learning (such as those described in Chapter 9 and others), people will use their experience to describe the ways in which a learner can progress in that field. This will enable people to describe different levels in the particular field of learning, e.g. engineering, history, health, etc.

Over time, comparisons between fields of learning will enable people to find the common assumptions which underpin each level. On this basis they will then be able to describe the nature of learning required to progress through levels on the National Qualifications Framework. Consequently, the levels should be informed by an understanding of learning complexity in the particular field of learning.

The South African Qualifications Authority will need to answer this question: how can the levels be described across different fields of learning? At present a rough equivalence to schooling and tertiary education is all that is agreed. For example, Level 1 is commonly compared to Standard 7 and Level 4 to Matric.

Energetic discussion on this question has already taken place in the Human Sciences Research Council, the National Training Board, in the Centre for Education Policy Development, in the Department of Education and elsewhere. A wide range of international examples have also been researched. They include the level descriptors developed in:

- Australia for the Australian Standards Framework;
- New Zealand for the New Zealand Qualification Authority;
- the United Kingdom for the National Certificates of Vocational Qualification, as well as for the General Vocational Qualifications.;
- the German IBF descriptors for occupations;
- Alverno College in the United States.

The consensus developing is that if the levels are to be meaningfully described, they need to emerge out of a comparative process. For example, if historians describe capabilities and competencies at Level 4, if engineers generate engineering competencies and capabilities at Level 4, and other groups do the same in other fields, the question becomes: what underlying generic learning abilities do these Level 4 competencies have in common?

A wide-ranging debate lies ahead on this issue. One thing is clear from the arguments developed in this book: the business of extracting commonalities across fields in the form of generic learning abilities is *not* the same as asserting that learners are able to move painlessly at a given level across learning fields, from, say, history to engineering. Real limitations on transferability arise from the specificity of the use of abilities for special purposes within a field. It cannot be assumed that they can effortlessly be applied elsewhere. Nevertheless the hope remains that innovations in the way in which assessment is carried out will have important implications for this discussion.

Learning to perform competently

Up to this point we had been considering performance within the range of application contexts represented in the group, (ranging from industry boards to universities and technikons, to examination bodies). The National Qualifications Framework is, however, concerned with the *accreditation of assessed* ***learning*** *performance*. So we needed to shift our thinking from expert performances by competent performers to another kind of performance: the stumbling, fumbling performance we engage in or demonstrate when we move into a learner role. Many people may argue that learner performance is the topic of curriculum discussion and not something which concerns the National Qualifications Framework. However, we found it crucial to our understanding of the Framework to consider people in the learner role and how they learn.

When people or a group enter a learner role they may be incompetent performers and they may lack confidence, but they never stand at the beginning of a learning pathway. They have learnt before, either through informal acquisition or some mode of instruction. This means that they are already familiar with a range of learning tasks requiring different kinds of performance responses. Here are a few examples:

- *"Memorise the following ..."*
- *"Use the given tools and materials and follow the given instructions to produce a ..."*
- *"Solve a problem in your head without access to tools, materials and instructions ..."*
- *"Watch what I'm doing and do it exactly like that ..."*
- *"Write a critical essay on the following topic ..."*
- *"Imagine yourself in the following situation and decide what you would do ..."*

The list is endless but the point, we hope, is clear: Learners have always learnt before (except, perhaps, as babies). They enter the learner role with an already-acquired store or repertoire of learning performances. This is what they *are able to do* and this is what they do, whether such learning performances match or fit the demands of the learning task or not. The store of learning performances already acquired can thus be a block to learning rather than assisting new learning. The point is illustrated by the following examples:

- *You may have attended a school where examination questions required you to recall reams of information or "facts" which you have to say or write down exactly as they were given to you. If you are then placed in a learning situation where you are required to find the answer by manipulating physical objects or by manipulating concepts in your head (abstract thinking), then your learning repertoire does not contain such a performance and you may struggle. What you then do is regurgitate facts in a rote manner instead of meeting the demands of the learning task.*

- *When you enter an academic field or a context where great value is placed on written argument and you are used to discussing issues verbally, then you may struggle. It may not mean that you do not have a grasp of the subject matter but rather that your learning repertoire has not prepared you to present a topic in writing as a rational or logical argument (in the form and style required). This means that you may struggle to put your ideas into writing to meet the demands of the learning task.*

- *If you worked in a place where you were required to "shut up and follow orders" then you may struggle when you are suddenly required to voice an opinion. It may not mean that you do not have an opinion, but rather that you have not learnt to express it. You may therefore keep quiet and in so doing, you do not meet the demands of the learning task.*

- *If you are used to situations in which you have to show that you can apply a technique adequately (for instance operating a machine or facilitating a group process) and you are asked to explain your rationale for using that particular technique, you may struggle. It may not mean that there is no rationale, but rather that you have not learnt to make it explicit. You may therefore describe what you are doing, instead of explaining why you are doing things in a certain way.*

Working with such examples helped us to understand that *familiarity with the learning task* is an important dimension of the learning process. We do what we are able to do, or what we have learnt to do, whether it is appropriate to the learning task or not. If our performance in the learner role meets the demands of the learning task then we are assessed as "successful"; if it does not, we fail.

Through the decisions made about *assessment criteria*, learning tasks will call for a wide range of problem-posing and/or problem-solving activities in a variety of communication modes, at various levels of dexterity. Learning and assessment tasks thus foreground certain dimensions of performance and place others in shadow.[14] It does not mean that the other dimensions are not also being exercised at the same time; it simply means that they are not being assessed explicitly.

Once the group had gained this understanding, we went on to explore other dimensions that have an effect on learning success or failure. These include:

- the learner's *familiarity with the language of learning* (for example, English as a first or second or third language);
- the *level of support* offered by the facilitator and fellow learners as well as by friends, work colleagues and family; and
- *texts* and the familiarity or accessibility of the text medium (for example books, videos, drama sketches, graphs, pictures, equipment).

We did not try to formulate a definitive list of factors that affect learning success or failure, but one thing became very clear to us: if the National Qualifications Framework is a mechanism for the *accreditation of assessed* ***learning*** *performance*, then learning contexts or the factors that impact upon learning have to be taken into account. While we may be able to talk about generic abilities, we cannot talk about generic learners! We have to ask the following kinds of questions about learners:

- What kind of learning histories or biographies do learners bring? In simpler terms: How have they learnt before?
- How familiar are they with the language in which learning will be offered? (Do they speak it as a first, second or third language?)
- How familiar are they with the terminology or jargon that will be used?

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[14] Thinking about a camera which creates a picture that has a focal point and background detail may help to bring out this point more clearly.

- What kind of learning support will they require?

- How have they been assessed before?

There may be many other questions that need to be asked in order to establish the relationship between the learning context, the learning task and the learner. We will not achieve learning contexts that are tailor-made for each individual learner, but such questions help us to make explicit the assumptions embedded in a learning context. We reach a clearer understanding of the pathways and barriers to success within a learning context. This understanding will inform the design of assessment tasks to be used for awarding credit, and may help more learners may achieve success rather than failure.

The issues discussed in this section may be formally written into National Qualifications Framework documentation only in respect of assessment criteria. However, they will also have to be taken into account by curriculum developers and providers. Assessors dealing with the recognition of prior learning will also have to take them into account when they provide design experiences and assess learning and other outcomes.

What makes transfer possible?

Up to this point we had been drawing a distinction between performance by a *competent* performer and performance by a *learner* performer. The next obvious topic to tackle was the highly contentious issue of "transfer of learning", or the bridge between learner performance and expert performance.

We realised that even if learning happens in a "real-life" context rather than in a classroom or simulated situation, and even if it occurs informally rather than formally, transfer is an important issue. A "learner" performer is, for instance, not granted the decision-making authority accorded to a competent performer. So there is a difference, on the one hand, between being in a learner or apprentice role and, on the other, doing the "real" thing in real time, under real conditions, with real authority and without guidance and support.

Transfer, however, also has a broader meaning. A learner can be required to perform a *single* activity in a *familiar* and *predictable* context, or to perform that activity in an *unfamiliar* and *unpredictable* context which requires a more demanding range of skills (such as exigency, management and interaction) in respect of the task. Similarly, a learner can be required to perform *multiple* activities in a familiar and therefore predictable context, or she or he can be required to perform these activities in unfamiliar and unpredictable contexts[15] which similarly require a wider and deeper range of skills.

For example, we may have learnt to plant a peach tree in clay soil. We know how big the hole should be, what fertiliser we should add and when the best planting time is. But do we know what to add when the soil is sandy? And can we plant all kinds of plants simply because we have learnt to plant a peach tree in clay soil?

This discussion makes it clear that we do not view transfer as something which happens *after* learning has occurred. *Transfer happens in the activity of learning itself.* It relies on learners becoming aware of how and why they are employing different abilities during task performance. It also relies on learners being able to "read" the contexts within which any task or activity is located, and understanding the differences between those contexts. Examples of differences in context could be the following:

- *When a person learns to do a financial calculation (for example, an administrator in a bank), the most important assessment criteria may be that she or he gets the calculation right, fills in the forms correctly and loads the information into the computer in the required format.*

  When that same person is dealing with a client in person, the most important assessment criteria may be that she or he gets the calculation right and explains the procedure to the client in an accessible way that promotes client satisfaction.

  In the first scenario, the financial calculation is done to meet the computer's requirements and in the second scenario, the calculation is done to meet the client's requirements. The financial procedures may be the same, but the contexts and purposes are different. The performer combines different abilities to extend the capability in the second scenario. The capability at a specified level of learning is thus being transferred from one context to another.

- *When a university student writes an essay, the most important assessment criteria may be evidence that the student has a grip on the topic, shows an understanding of the ideas and arguments presented by others; and handles the essay format adequately, including annotations and references according to accepted academic writing conventions.*

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[15] Obviously there are many combinations of familiarity/unfamiliarity and predictability/ unpredictability between these two poles.

When the same student enters a workplace and has to write up a strategic planning exercise, the most important assessment criteria may be an objective reflection of the viewpoints that were expressed (and not the writer's interpretation of those) in synthesised form.

In both scenarios, the writer draws on a range of information-gathering, processing and synthesis abilities, but the different institutional contexts and different reader audiences call for different applications of these abilities. The capability thus differs in different contexts.

- *When an apprentice learns to drill a hole in a pipe in a technical college workshop, cheaper materials may be used than are used in the workplace. If the measurement is a fraction out, the apprentice redoes the procedure until she or he gets it right.*

  When the same apprentice learns the same procedure in the factory she or he works with an expensive material such as aluminium. A measurement that is a fraction out has to be fixed because the material is too expensive to start again "until she or he gets it right". The capability of the expert performer is thus to get it right the first time.

Transfer, therefore, implies a capacity for *flexibility*. Performers, whether learners or experts, must be able to "read" the assessment criteria inherent in a context and bring their capabilities to bear in contextually-appropriate ways. The extent to which they are expected to do this will depend on the level at which they are assessed.

While we all accepted that learning contexts should approximate "real-life" contexts, the question that, by this time, had come up again and again was: "*What do we assess and how do we assess it?*"

Given our "thick, rich" understanding of "capability", it should come as no surprise that we became convinced of the value and importance of *integrative assessment*. By integrative assessment we mean that assessment practices must provide the learner with an opportunity to show that she or he has integrated capabilities across a range of contexts. In other words, assessment practices must be *vehicles of transfer*, rather than vehicles of rote learning. Learners must be given the opportunity to use concepts and procedures in both predictable and unpredictable contexts (appropriate to their level) during the learning situation itself. In this way the gap between learning performance and expert performance is reduced. It is also the way in which task performance and exigency management are *both* addressed.

Assessment practices should further encourage learners to assess their own learning performance so that they understand what helps them to solve a problem and where they experience difficulty. Learning about one's own learning is not simply the rhetoric of "lifelong" learning. Such processes actively promote *transfer* because they make our thinking processes visible to ourselves.

Performance in relation to qualifications

We have tried to convey a sense of all the issues that we considered while trying to develop terms and concepts that will help rather than prevent people from being able to set standards of performance that have national validity and acceptance.

Here is a brief outline showing how the concepts discussed in this chapter have informed our ideas of qualifications and standards. These issues are more fully discussed in the next few chapters.

1. *Competence* refers to the integrated application of capabilities within specified contexts (which may stretch from being familiar and predictable to completely uncertain, unfamiliar and unpredictable, depending on the level of competence required).

2. Competence may be recognised on the National Qualifications Framework as a *qualification*. A progression pathway of qualifications, therefore, expresses different levels or combinations of competence.

3. *Integrated assessment* of competence at a specified level[16] produces evidence of a learner's ability to integrate capabilities and to deal with both familiar and predictable and/or unfamiliar and unpredictable contexts.

4. Each qualification is made up of a number of *units of learning*. Some are compulsory and some are selected from a bank of elective units.

5. Each unit is described in terms of a *unit standard*. In a unit standard, a capability may be expressed as a *learning outcome*. These are "unpacked" in the format proposed for unit standards under the following headings[17]:

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[16] This anticipates the discussion of qualifications in Chapter 7.

[17] This anticipates the discussion of unit standards in Chapter 7.

5.1 Performance outcomes which include:
    i. Conceptual problem-posing and problem-solving
    ii. Tool usage and dexterity
    iii. Communication and social interaction for task performance, task management, exigency management and role performance
5.2 Assessment criteria
5.3 Underpinning knowledge (content or information)
5.4 Contextual or range statements
5.5 Value framework.

We know, for instance that the issue of "values" is extremely controversial and that it may be dropped as one of the unit standard descriptors. We also know that the three sets of abilities outlined in 5.1 above, may not apply to all capabilities. In different situations, different abilities may be more important and the emphasis on these abilities will differ. It is, however, this logic that led us to our formulation of unit standards and qualifications which will be discussed in greater detail in the next chapters.

We are not posing this as the final word on the National Qualifications Framework. On the contrary, we offer these concepts as ways forward that will promote discussion about lifelong learning pathways and ways of realising them on the National Qualifications Framework.

By emphasising abilities in relation to content topics and by acknowledging the role of values and the importance of integrated assessment, we have hopefully depicted competence in a broader and more coherent way that will help our country to achieve the levels of competent performance that it seeks.

CHAPTER 6

DESCRIBING COMPETENCE AND CAPABILITIES IN DIFFERENT FIELDS OF LEARNING

This chapter looks at what we mean by "competence" in terms of performance in different fields of learning.

COMPETENCE

At the end of the last chapter we argued that a person demonstrates competence in a particular context when he or she integrates a range of capabilities in continuous activity. We adopted the term *capability* in order to convey our understanding of performance as the expression of generic abilities which relate to specific fields of learning and contexts in which they are used and their associated value frameworks.

In this chapter we unpack this understanding further. In our discussions we wanted to understand the many conscious and unconscious judgements and decisions, based on relevant information, that inform or direct any action. In the last chapter we used the metaphor of an iceberg. We described the actions which become visible in performance as the tip of the iceberg, and the underlying knowledge as that part which lies "under the surface". Our task in this chapter could thus be put in this way: how can we describe the whole iceberg, that is, how can we describe the complex of abilities which constitute capability?

Debating the outcomes of the learning process

Traditionally, *qualifications* have been considered the end points of learning. The Concise Oxford Dictionary (eighth edition) defines a qualification as "an accomplishment fitting a person for a position or purpose".

This definition, possibly inadvertently, captures a dichotomy ("position" vs "purpose") which has been the subject of much international debate. For example, the Australian National Board of Employment, Education and Training[18] quotes John Woolley as far back as 1862, saying:

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[18] "Developing Lifelong Learning through Undergraduate Education", Commissioned Report No. 28, Australian Government Publishing Service, August 1994 : 61.

> *"The idea of a university ... is two-fold: it is first, what its name imparts, a school of liberal and general knowledge; and, secondly a collection of special schools, devoted to the learned professions.. The former considers the learner as an end in and for himself [sic], his perfection as man simply being the object of his education. The latter proposes an end out of and beyond the learner, his dexterity, namely, as a professional man [sic]..."*

However, the dichotomy of qualifications for "learning to learn" and "learning to do" is being challenged worldwide by the notion of underpinning or overarching "generic abilities". The authors of the report quoted above comment further[19]:

> *"Those faculties and institutions which favour liberal and general teaching, talk of their graduates as 'educated', whereas those faculties and institutions which concentrate on special or vocational teaching tend to refer instead to their graduates as 'competent'...(but) (ir)respective of the balance that is desired between the 'liberal' and the 'vocational' components of undergraduate education, there is another set of learning outcomes which it is reasonable to assume would be attained by virtually any graduate. These are those 'generic' or 'transferable' attributes which are not specific to any one vocation, institution, program or workplace, but which have application in a diverse range of settings or contexts. They include: communication skills, leadership, self-organisation, time management, analytical skills, critical thinking, teamwork, etc."*

In the previous chapter, we explored the notion of abilities as part of any capability and put forward the view that such "generic abilities" are not separate from context or performance, but are expressed *through* context and performance. We suggested that one cannot automatically assert that the abilities are transferable. Transferability may be promoted through assessment techniques which stretch the learner from the familiar to the unfamiliar in various ways, and which are appropriate to the desired level of performance.

Describing performance

Once again we return to our metaphor: how does one describe the iceberg? How can we describe the knowledge and abilities which inform or direct a particular action or set of actions? How can we describe the many conscious and unconscious judgements and decisions which inform or direct a particular action or set of actions? In sum, how can we describe "whole performance"?

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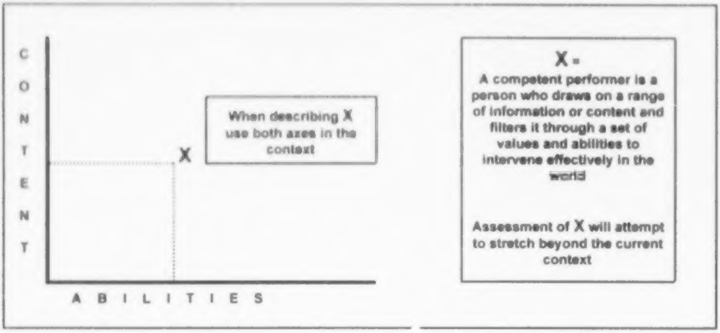
[19] Ibid.

The answer seems to mean working in two dimensions as illustrated below:



When describing X use both axes in the context

X =
A competent performer is a person who draws on a range of information or content and filters it through a set of values and abilities to intervene effectively in the world

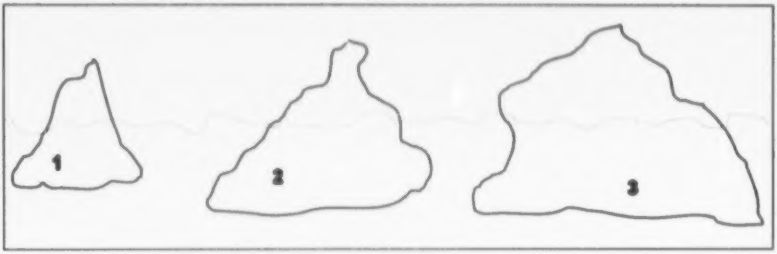
Assessment of X will attempt to stretch beyond the current context

For example, a mathematician at National Qualifications Level 1 is capable of *identifying* and *calculating* a percentage problem presented in verbal or symbolic form.

Content : Concept of percentage (%)
Ability : Identify and Calculate
Range : Verbal and Symbolic.

This example was written for a specified level - National Qualifications Framework Level 1. Clearly, higher order mathematical information (content) and abilities are required at National Qualifications Framework Level 4.

On closer inspection, there are different levels of expert performance. This can be captured by continuing our metaphor and arguing that there is seldom one iceberg: describing an iceberg is a relative business - it is more like describing a number of icebergs in relation to one another.



And so the issue of level or progression is introduced - a person can be a competent performer within a limited range (1), an expanded range (2) or at, say, a professional range (3). There may, of course, be more than three "competent performance levels" which can be meaningfully described. But to run with the example, the question becomes three questions:

- using what content, and through which abilities and values can we describe a competent performer (1)?
- using what content, and through which abilities and values can we describe a competent performer (2)?
- using what content, and through which abilities and values can we describe a competent performer (3)?

Designing learning becomes an issue of what the additional demands are which are placed on learners at (1) to get to (2), and what additional demands there are at (2) to get to (3). And for all three, how could one identify a competent performer at each level?

Relating performance to a field of learning

Describing the iceberg ("whole performance") is also specific to a particular field of learning.

> "What is a competent *plastician* at skills level 3?" is the question that generated the innovative work within the Plastics Industry Training Board[20].
>
> "What is a competent *professional engineer*?" is the question that generated the answers of the Engineering Council of South Africa.

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[20] All of these examples are elaborated on in Chapter 9.

> "What is a competent *communicator* at ABET level 3?" is the question that led to outcomes described by the Independent Examinations Board.

It seems that the answers flow once the field of learning is specified, rather, that our understanding of performance comes from the specific field of learning. For "general education" the field is often a traditional "subject". For more "vocational" learning, the field is often about the range of performance required in the specified roles or occupations.

Defining the *fields* of learning becomes almost as critical as defining "competent performance" because the field of learning influences the way in which the generic learning abilities are galvanised into performance. The experience, tradition, expectation and the research that underpins the "received wisdom" in the field tends to be delimited by coherent bodies of knowledge. Naturally this is never static: in reality the boundaries between fields of learning are always shifting and changing, and that the change itself is defined against what was accepted before. Finding meaningful connections between previously separated fields (such as textiles and pharmaceuticals) can provide innovative learning pathways, just as generating new sub-divisions (or niches) within a field is equally creative.

The broad fields of learning proposed in this book are reproduced below[21] as an illustration of how such fields might be defined in future. The list is merely intended as an example and is not intended to close the discussion. It is enclosed to illustrate broad bodies of knowledge (information plus abilities plus values) which, by and large, cohere because of the similarity of the organising principles, purposes and rules which underpin them. Generic, broad categories for fields of learning are also seen as preferable in order to promote transfer.

PROPOSED FIELDS OF LEARNING CLASSIFICATION SYSTEM

BROAD FIELD	SUB-FIELDS (Categories)
Agriculture and Nature Conservation	Agriculture and renewable resources (Agriculture; Forestry; Fisheries) Nature conservation Horticulture
Arts and Artistic Crafts	Visual arts Performance arts (Stage; Musical, etc)
Business, Commerce and Management Sciences	Financial Administration Commercial practice Property Marketing Leadership, management and supervision

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[21] Further discussion on the scope and function of this classification system is found in Chapter 8 and in Appendix B.

Communication Science and Languages	Communication Language.
Education, Training and Development	Education Training and development
Engineering and Manufacturing Processes	Design, construction and maintenance Production and manufacturing processes Mobile equipment and materials handling Mining Computer sciences and information technology
Human and Social Sciences	Histories Geographic / Economic Individuals and Societies Religions
Law, Military Science and Security	Law Military science and security
Mathematics	Pure mathematics Applied mathematics
Medical Sciences, Health and Social Services	Medical and dental (Animal; Human {medicine and dentistry; laboratory, care and social services}) Sport and recreation Food and nutrition Fire and safety
Natural and Life Sciences and Technologies	Natural sciences Life sciences
Utility Services	Hospitality and tourism Beauty technologies Publishing and book binding Archiving and information storage Wholesale and retail

Naturally there is a limited amount of science and a large amount of tradition, social agreement and systematic thinking which is required in generating lists such as these. "Reality" is a vast continuity. Each heading is itself a complex clustering of diverse "competencies", across ranges of contexts and levels of complexities, but which are able to bear a meaningful relationship to one another. The authors of this book supported this "order" of classification because too many fields would limit the number of meaningful relationships which could be drawn and developed, and too few would not enable users to relate their experience to the "classification system" meaningfully. The group felt that identifying fields of learning may be a useful way to begin identifying pathways for portability and progression.

Within each broad *field* of learning, *levels* of competent performance can be identified and will usually be associated with qualifications. New labels for new levels can be identified for social or economic purposes - such as adult basic education and training levels or engineering and manufacturing processes levels. These new levels may become discrete qualifications, or may simply be stepping stones on the way towards qualification. In a workplace context, these levels may simply be identified for grading purposes, or may be seen as "phases" which are recognised, but not certificated, towards a national benchmark e.g. trades person or chef.

In the field of **Agriculture and Nature Conservation**, how many levels of competent performance could be identified within, for example, *horticulture*? (A home gardener? a market gardener? A professional?)

Having generated answers to the first question, it is then possible to ask of each of the identified levels of competent performance, what capabilities the learner must "master" and integrate to yield this competence.

In the field of **Business, Commerce and Management Sciences**, how many levels of competent performance could be identified within, for example, *administration*? (An information processor? An office manager?)

Having generated answers to the first question, it is then possible to ask of each of the identified levels of competent performance, what capabilities the learner must "master" and integrate to yield this competence.

In the field of **Human and Social Sciences**, how many levels of competent performance could be identified within, for example, *history*? (At a General Education Certificate level? At a Further Education Certificate level? At a first and research degree level?)

Having generated answers to the first question, it is then possible to ask of each of the identified levels of competent performance, what capabilities the learner must "master" and integrate to yield this competence.

CAPABILITIES

Having arrived at a label for a competent performer engaged in a continuous activity within a field of learning, at a specified level on a spectrum of progression, it becomes necessary to consider what capabilities such a person requires.

A capability is defined in this book as "the expression of generic abilities as they relate to specific content areas, context and value frameworks". The emphasis is on the word *specific*, although the focus is on the performer not the task.

It is suggested that a way into identifying the capabilities needed for competent performance, is by completing the following statement:

At this level, a competent _____(insert role description) is capable of ...
- _____(ing);
- _____(ing);
- _____(ing).

and is able to integrate these capabilities successfully into competent performance.

The "...ing" words can be roles e.g. a competent teacher must be capable of ***assessing learners*** and must also be capable of ***designing learning experiences*** for groups and individuals. The "...ing" word could also be activities commonly associated with more practical contexts e.g. a competent plastician must be capable of ***overseeing the quality system, especially checking and testing of products and materials***.

The "....ing" form is suggested as the form used to describe capabilities because it suggests ongoing activity. In order to assess capability, assessment criteria would need to identify common performances and exigencies which might be seen as acceptable evidence of the capability - but our understanding of capability cannot be reduced to the evidence.

Embedded in the capability is a range of "theory" or "information" which is needed to underpin performance. Typically performance is also often associated, through tradition, experience and the internal rules and values of the field, with particular learning abilities. Problem identification could underpin many performances, but may need to be explicitly highlighted for certain activities such as "diagnosing faults" or "settling disputes".

Capabilities, as enablers of competent performance, can thus be identified by considering the activities required to be demonstrated by the competent performer within a particular field of learning.

CHAPTER 7

DESCRIBING QUALIFICATIONS

This chapter outlines some of the criteria which the South African Qualifications Authority would need to consider in registering a unit or a qualification and proposes possible formats for qualifications and unit standards.

Who will work out the rules for qualifications?

In Chapters 5 and 6 we outlined our thinking on the meaning of the concepts of "competence" and "capability". In this chapter we attempt to pin down these concepts in a set of guidelines for qualifications and unit standards. We have argued that competence is comprised of an integrated set of capabilities. It follows then that if "competence" becomes associated with the definition of qualification, so "capabilities" will become associated with unit standards. Qualification is the *formal* recognition of competence and unit standard is the *formal* recognition of capability.

Another way of putting this is:

A qualification	*is recognition of*	**competence**
is built up from		is built up from
unit standards	*are recognition of*	**capabilities**

or

Qualification is to **competence** as **unit standard** is to **capability**

In order to receive a qualification, a learner or candidate would have to submit themselves for an integrative assessment.

Criteria for registering units and qualifications

Once it has been established, the South African Qualifications Authority will need to determine the level at which to register a unit or qualification on the National Qualifications Framework. At the beginning, all that the South African Qualifications Authority will have is the notion of a framework comprising eight or eleven levels[22]. To develop the criteria for registering units and qualifications on different levels, it will need to develop a set of questions which it can use to compare the levels in the different fields.

For example, the South African Qualifications Authority will be concerned with issues such as:

- Is the unit or qualification in the "general education and training" band? In the "further education and training" band? In the "higher education and training" band?

- What is it about level 2 in any field of learning that makes it level 2? What is it that makes level 3 higher than level 2? And so on.

Questions like these will give rise to *criteria* which the South African Qualifications Authority could use to decide on which level a qualification or unit standard should be registered. The criteria will be indicators of the complexity of the learning and should be easily understood by learners, teachers and others in society.[23]

Once available, these criteria will also be used by the National Standards Bodies in their deliberations in order to forward recommendations to the South African Qualifications Authority concerning the registering of unit standards and qualifications at different levels.

Proposal for qualifications

Notwithstanding the fact that these are questions that will confront the South African Qualifications Authority, the questions that confronted us included:

---

[22] While the National Training Strategy Initiative document called for 8 qualification levels, other national groupings have called for 11 in order to include certificates for the three adult basic education and training levels before the General Education Certificate. This debate is reflected in the Education and Training White Paper (March 1995).

[23] We have presented arguments, in Chapter 5, as to why criteria relating to *levels* cannot be written in advance of a piloting phase.

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- how could these criteria be developed? and
- how can these criteria be translated into rules and procedures for qualifications being registered or endorsed by the South African Qualifications Authority on the National Qualifications Framework?

We envisaged a scenario in which the South African Qualifications Authority would draw up general criteria which would then be used by National Standards Bodies to suggest levels and rules of combination for qualifications. In this scenario, rules for qualifications will be drawn up for each of the bands of learning on the National Qualifications Framework by competent groups discussed as Qualifications Councils in Chapter 10.

The idea behind such recommending qualifications bodies is to ensure full national stakeholder participation in the determination of rules of combination for qualifications and, especially in the general and further education and training bands of learning, to ensure articulation and equivalence across learning pathways.

Rules of combination

A qualification, as argued above, is envisaged as comprising a range of unit standards. The prime question is "which unit standards"? The *rules of combination* (ie. what must be combined with what) are likely to differ within each of the broad sections, and will depend on the overall guidelines generated for the different qualifications. It is likely that there will be different guidelines for:

- a school-based General Education Certificate
- an Adult Basic Education and Training General Education Certificate
- credit accumulation for Further Education and Training Certificates
- diplomas, degrees, professional certificates, research qualifications and so on.

For example, the national Department of Education's Directorate of Adult Basic Education, as well as the Minister of Labour's National Training Board, have initiated a number of pilot projects designed for adult learners. Both initiatives have agreed on three broad learning categories within which learners would need to accumulate credits in order for a General Education and Training Certificate to be issued.

These categories are:

- **Fundamental**, ie. Language Communications and Mathematics (Numeracy);

- **Contextual** or **Core**, ie. social studies, development studies, industry studies, community studies, human rights studies and the like; and

- **Specialisation**, ie. the theory and practice of a chosen specialisation related to a particular field of learning. At these levels it could include specialisations such as welding, typing, community organisation, basic health, and the like.

The purpose of the integrative assessment

While the rules of combination for qualifications will be established across fields of learning, the key intentions of the National Qualifications Framework will also have to be met. In order to meet these key intentions, the South African Qualifications Authority will overlay a requirement of "lifelong learning" on to all qualifications. In other words, issues of integration, progression and "learning how to learn" will need to be shown in all qualifications. No qualification will be seen as "single purpose" e.g. training simply to become an electrician. Rather, all qualifications will be "dual purpose": e.g. in training to become an electrician, a person will also acquire the basis for further learning (education and training).

Integrative assessments are seen as providing the South African Qualifications Authority with a tool for ensuring the measurement of "full competence" in respect of a particular learning pathway and ensuring assessment of abilities within relevant contexts. "Trade tests" played this role in the past, as did the final thesis at higher education levels.

The South African Qualifications Authority will have to ensure the "seamless progression" from one qualifications level to another.

A proposed format for qualifications

The South African Qualifications Authority may well determine that applications for the registration or endorsement of a qualification on a level or levels, should be submitted in a particular format. An outline of such a format is given below, together with two illustrative examples, one for the higher education and training band through a formal university route and one for the further education and training band through a combination of formal education and work-based training routes. These examples may well be indicative of future requirements:

<table>
<tr><td colspan="3">**QUALIFICATION STANDARD** Page of</td></tr>
<tr><td>**SAQA Logo**[1]</td><td>**Qualification Title**[3]</td><td>**Recommending body**[2]</td></tr>
<tr><td colspan="2">**Level**[4]
Issue Date[5]
Expiry Date[6]</td><td>**Credit Totals**[7]
At Level:
Lower:
Higher:</td></tr>
<tr><td colspan="3">**Statement of Competence**[8]</td></tr>
<tr><td colspan="3">**Required Units**[9]</td></tr>
<tr><td>Category 1[10]</td><td>Category 2[11]</td><td>Category 3[12]</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td colspan="3">**Integrative Assessment Criteria**[13]</td></tr>
<tr><td colspan="3">**Notes**[14]</td></tr>
</table>

1. *South African Qualifications Authority logo*
   Indicates that this qualification is registered or endorsed by the South African Qualifications Authority as meeting the National Qualifications Framework requirements for the particular level, as recommended by the National Standards Body for that field of learning and the "qualifications body" (see the proposal for "Qualifications Councils" in Chapter 10).

2. *Recommending body*
   Identifies the body (National Standards Body / Qualifications Council) which recommended the registration criteria for endorsement of this qualification.

3. *Qualification title*
   This is the registered title of the qualification.

4. *Level*
This is the National Qualifications Framework level that this qualification meets as specified by the South African Qualifications Authority requirements.

5. *Issue date*
The date at which the qualification was registered or endorsed by the South African Qualifications Authority as meeting its requirements. That is, the date from which certificates may bear the South African Qualifications Authority logo.

6. *Expiry Date*
This is the date before which the Recommending Body has to revisit the qualification standard. It is not an expiry date for individuals who hold the qualification but ensures that recommending bodies and South African Qualifications Authority revisit qualification standards on a regular basis.

7. *Credit totals*
This is a record of the number of credits at their respective National Qualifications Framework levels which make up this qualification. The specification of these allows the candidate to present credits at lower and higher levels for the award of this certificate.

8. *Statement of competence*
The broad statement of the integrated demonstration of capabilities in continuous activity within a specific context.

9. *Required units*
This section deals with the required number and type (rules of combination) of units required by South African Qualifications Authority for registration or endorsement of a qualification at a particular level. It is proposed that these will be divided amongst different categories of learning depending on the National Qualifications Framework level of the qualification. In essence, categories for qualifications at and below the Further Education and Training exit Certificate will differ from categories in the higher education and training band.

10. *Category 1*
For qualifications in the general education and training band, this would be the Fundamental category, namely Language Communications and Mathematics (Numeracy). Up to the General Education and Training Certificate level, the proposal

is that both Language Communications and Mathematics (Numeracy) are compulsory fields of learning. Within these two fields, Compulsory and Optional units may be specified, depending on the proposals of the relevant recommending bodies. Special categories for a school based General Education Certificate may be even more prescriptive.

For qualifications in the further education and training band, it is proposed that the Fundamental category, namely Language Communications and Mathematics (or Numeracy) be retained as a credit accumulation category and that it be required of all learners that they present credits for qualification purposes in this category but that these credits can either be accumulated in respect of Language Communications or Mathematics (Numeracy). Learners would also have the choice of presenting credits in both fields of learning. Again, within these two fields, Compulsory and Optional units may be specified, depending on the proposals of the relevant recommending bodies.

For qualifications in the higher education and training band, this would be a Compulsory category and these units would be determined by the relevant National Standards Body for a particular learning pathway. Credits for units in the Compulsory category would have to be satisfied by the learners of all providers.

11. *Category 2*

For qualifications in the general and further education and training bands, this would be the Contextual (or Core) category. Compulsory and Optional units may be specified, depending on the proposals of the relevant recommending bodies.

For qualifications in the higher education and training band, this would be an Optional category. These units would be written in the National Qualifications Framework unit standards format and would be approved by the relevant National Standards Body for a particular learning pathway. These units may be included by a particular provider, in a qualification registered or endorsed by the South African Qualifications Authority, subject to the rules of combination of the qualification standard.

12. *Category 3*

For qualifications in the general and further education and training bands, this would be the Specialisation category. Compulsory and Optional units may be specified, depending on the proposals of the relevant recommending bodies.

For qualifications in the higher education and training band, this would be an institution specific optional category. These are internal unit standards which are designed and offered by an accredited provider to specify the outcomes of a course conducted by the provider. These units may be written in the National Qualifications Framework unit standards format and may be approved by the relevant National Standards Body for a particular learning pathway. These units may be included in a qualification offered by a particular provider, and endorsed by the South African Qualifications Authority, subject to the rules of combination of the qualification standard. It should be noted that it would not be necessary for such units to be submitted for registration on the National Qualifications Framework, although, over time, these may be so registered.

13. *Integrative assessment criteria*
This records criteria and guidelines relating to the assessment of the integrated capabilities or competence that are required to be met in order for the qualification to be issued. Such criteria and guidelines should include specification for assessment and recognition of prior learning.

14. *Notes*
Any specific instructions to those using the qualification standard or accredited to issue such a qualification (for example, providers, assessors, moderators, Education and Training Qualifications Authorities, *and* learners).

In the following pages we present two examples of how qualifications may be set out in different fields of learning. The first is an example drawn from the higher education and training sector for an engineering degree. The second is an example drawn from the further education and training sector, generic to a number of industrial sectors, for a team leader certificate.

Qualification standard example : ENGINEERING

QUALIFICATION STANDARD Page 1 of 1

SAQA Logo

BACHELOR OF ENGINEERING IN ELECTRICAL ENGINEERING

E C S A logo

Level :	National Qualifications Framework Level 6	**Credit Totals** :	
		At Level:	500
Issue Date :	1 August 1995	Lower:	1500
Expiry Date :	31 July 1999	Higher:	0

Statement of Competence :

Demonstrates communication, problem-solving, analytical, design and synthesis abilities based on mathematical, physical and electrical engineering sciences placed in the wider perspective of engineering practice.

Required Units:

Compulsory Units	**Optional Units**	**Institution specific Units**
Mathematics MAT5101 MAT6101 Physics PHYS5101 PHYS5102 Engineering Computing COMP5103 Engineering Design ENG5109 ENG6109 ENG7109 Electrical Circuits ENG5102 Electronics (ENG6121) o o o	A maximum of 500 credits from the following list: Telecommunications ENG6320 ENG7320 Process Control ENG6222 ENG7222 Electromagnetics ENG7421 o o o	A maximum of 500 credits may be included from the offerings of an accredited provider.

Integrative Assessment Criteria

Notes :

The above example is hypothetical. It is supplied for illustrative purposes and is incomplete.

Qualification Standard Example : INDUSTRY TEAM LEADER

QUALIFICATION STANDARD Page 1 of 1

SAQA Logo **INDUSTRY TEAM LEADER** **N S B logo**

Level	National Qualifications Framework Level 2	**Credit Totals**	
		At Level	36
Issue Date	1 August 1995	Lower	0
Expiry Date	31 July 1996	Higher	6

Statement of Competence

Manages all resources (people, equipment, materials) to optimise performance of the team in a production environment

Required Units

Fundamental Category	**Contextual Category**	**Specialisation Category**
Language Communication LCOM6101 Mathematics/Numeracy MATH6101	Industrial Relations LAB2703 Environmental Impacts (Rail placement - Transport industry) ENVI4501 Environmental Impacts (Surface mining - Mining industry) ENVI4801 o o o	Leadership MAN3601 Materials Handling ENG2404 Procurement MAN2901

Integrative Assessment Criteria

Notes

The above example is supplied for illustrative purposes only and is incomplete

A proposed format for unit standards

A standard is the smallest unit that can be meaningfully assessed. It is simply a formal listing of outcome statements collected into meaningful and yet "bite-sized" chunks. In other words, a unit standard is the "home" for the capability statement, within a field of learning, at a specified level on the National Qualifications Framework.

Here is a proposed format for a unit standard. It is drawn up on the basis of the preceding debate and each section is explained in the notes which follow:

<table>
<tr><td colspan="3">UNIT STANDARD Page of</td></tr>
<tr><td>SAQA Logo[1]</td><td>Unit Title [3]</td><td>NSB ID / Logo [2]</td></tr>
<tr><td colspan="2">Unit number : [4]
Level : [5]
Credit : [6]</td><td>Field : [7]
Issue Date : [8]
Expiry Date : [9]</td></tr>
<tr><td colspan="3">Capability :
"A candidate at this level is capable of "... ing" [10]</td></tr>
<tr><td colspan="3">Entry Assumptions : [11]</td></tr>
<tr><td colspan="3">Performance Outcomes : [12]</td></tr>
<tr><td colspan="3">Assessment criteria : [13]</td></tr>
<tr><td colspan="3">Underpinning Knowledge : [14]</td></tr>
<tr><td colspan="3">Range Statements : [15]</td></tr>
<tr><td colspan="3">Moderation : [16]</td></tr>
</table>

1. *South African Qualifications Authority Logo*:
   This item indicates that the unit standard is registered with the South African Qualifications Authority.

2. *National Standards Body identification/Logo*
   This item identifies the National Standards Body that wrote or reviewed this unit standard, and submitted it for registration.

3. *Unit standard title*
   A short reference to the capability statement for the unit standard.

4. *Unit number*
   An alpha-numeric code which uniquely identifies the unit.

5. *Level on the National Qualifications Framework*
   The level assigned to the unit standard relative to the eight levels and three sub-levels of the National Qualifications Framework.

6. *Credit*
   The credit value assigned to this unit, evaluated according to a formula still to be established. For example, it may be possible to equate the credit points to a nominal number of contact hours required to prepare an "average" learner for assessment, as judged by the relevant National Standards Body. The credit points value should lie in a range that is not too large. A figure of 40 hours, for example, was suggested in the National Training Strategy Initiative document. The points are linked to the level in order for qualifications to require specified numbers of credit points at each of a number of levels (subject to the rules of combination).

7. *Field*
   This item indicates where the capability fits into the national system of "field" classifications. (See the proposed Classification System discussed in Chapter 6 and the related discussion in the Appendices).

8. *Issue date*
   The date that this unit standard was registered by the South African Qualifications Authority or, in the case of *draft* units, the date of issue by the National Standards Body.

9. *Expiry date*

The expiry date of a registered unit standard, or, in the case of *draft* units, the date of the end of the period for comment and amendment. This is the date by which the unit standard has to be reviewed by the relevant National Standards Body and presented to the South African Qualifications Authority for registration.

10. *Capability*

A brief statement which describes the broad purpose of the unit. It is written in the form of an "...ing" statement which completes the stem: "A person at this level, in this field of learning, is capable of ...". It should be noted that the capability statement refers to "the candidate" so as to take account of people applying for unit standard accreditation through the assessment and recognition of prior learning.

11. *Entry assumptions*

List of pointers to unit standards which are known to satisfy the prerequisites for learning required for entry into the present unit standard. This may refer to previous units of learning from all or some of the categories.

12. *Performance outcomes*

Brief statements of what the candidate at this level needs to demonstrate as meaningful components of capability. These statements are usually written in the form of "*verb + noun + qualifier*" (indicating level, where necessary). There will normally be more than one statement, but not necessarily so.

13. *Assessment criteria*

Concise statements which will guide an assessor to determine whether or not to award credit to a candidate for this unit standard. These statements are *contextualised abilities*. Hence they are also important indicators of the level of complexity for registration on a National Qualifications Framework level. The key question is "what will count as evidence for the issuing of credit?"

These statements will be written in the form of *noun + verb + qualifier* (to indicate level). Such statements will usually be developed by asking questions drawn from two sources:

(i) from the lists of general abilities which have been discussed in this book, such as problem-posing and problem-solving, analysing and decision-making, as well as communication. Questions such as "what range of problems is a person at this level likely to encounter? and what would an appropriate response be?"

(e.g. identify only, determine cause, recommend remedies, implement and evaluate solutions) and "With whom are they having to communicate and why?"

and

(ii) from the four components of competence identified at the beginning of Chapter 5, namely,

- (a) routine performance - if all goes well, what is this person expected to demonstrate?
- (b) routine task or performance management - what sequencing, prioritising and people/time/resource management is required at this level?
- (c) non-routine task or performance management - if things change, go wrong or could be improved, what is a person at this level expected to do?
- (d) role in context - with whom and in what way does a person *critically* need to interact with others.

14. *Underpinning or embedded knowledge*

This is a list of topics or items which are generated in response to the question "what knowledge can learners reasonably be expected to draw on in this field of learning?"

15. *Range statement*

This is a general guide to the assessor and candidate (or learner) as to the scope, range of knowledge, degree of difficulty, context and level of performance at which the candidate is expected to achieve.

16. *Moderation*

National Standards bodies will have to nominate bodies which will ensure that wherever and however assessment is conducted for credit towards this standard, a comparable interpretation of "capability" is being used. It is to ensure that there is no "standards drift" across different assessment sites. Such a drift would damage the credibility of the system and work against the principles of portability and mobility.

Unit standards for illustrative purposes only

The unit standards which are presented below are a first attempt to apply the ideas in this book to practical examples. We are first to accept that they need further work and more careful development. Nevertheless, we ask the reader to consider these examples as illustrations of how the ideas could be interpreted in practice, not as finished or definitive products!

ILLUSTRATIVE UNIT STANDARD Page 1 of 1

SAQA **Logo**	**GENERATING REPORTS**	**NSB** **ID / Logo**

Unit number : E456
Level : National Qualifications Level 4
Credit : 4

Field : Communication Science and Languages
Issue Date : 1 October 1995
Expiry Date : 31 December 1995

Capability : A candidate at this level is capable of GENERATING REPORTS

Entry Assumptions:
(a) Language Communications : LCOM2 (Fundamental category, pre GEC)
and
(b) Mathematics : MATH2 (Fundamental category, pre GEC)

Performance Outcomes
1. Collect, organise and analyse information.
2. Generate written reports.

Assessment criteria :
1.1 Information is gathered from predictable and easily available sources.
1.2 Faulty information is identified, sources are established and rectified within a known range
1.3 Information is analysed and organised in a way which is consistent with the purpose.
1.4 Conclusions are drawn which are consistent with the information.
1.5 Recommendations are generated when requested.

2.1 Information is presented using the required format and terminology.
2.2 Reports are presented on time.
2.3 Special purpose reports are presented to communicate problems and make recommendations - where problems are of a predictable nature.
2.4 Reports are acceptable to the writer and the recipient.

Underpinning Knowledge :
Capable performers will need to know:
i. required format for routine reports;
ii. range of report purposes and associated requirements;
iii. range of audiences for whom reports may need to be written;
iv. range of ways of presenting data, e.g. charts, lists, graphs, etc.
v. reasons why accurate and timeous reports are needed in this context.

Range Statements

Report is used to denote any required written communication that goes beyond a simple recording of facts (such as completion of a pro forma shift production schedule) to include a level of analysis and/or research. Simple analysis and research would be required using readily or easily available information.

Moderation :

This unit could be moderated by the Communications National Standards Body nominee.

ILLUSTRATIVE UNIT STANDARD Page 1 of 2

SAQA
Logo

OVERSEEING MACHINERY FOR VOLUME OR HIGH SPEED MANUFACTURING PROCESS

Engineering and Manufacturing Processes National Standards Body

Unit number : ENG4123
Level : National Qualifications Framework Level 4
Credit : 20

Field : Engineering skills and continuous production processes
Issue Date : 1 October 1995
Expiry Date : 31 December 1995

Capability : A candidate at this level is capable of RUNNING AND LOOKING AFTER MACHINERY AND EQUIPMENT REQUIRED FOR A VOLUME OR HIGH SPEED MANUFACTURING PROCESS

Entry Assumptions
(a) Qualified in volume or high speed processing at National Qualifications Framework Level 3
or
(b) N2 with Engineering Mathematics, Science and Drawing and Trade Theory subjects in Fitting, Electrical or material specific theory subject *plus* Induction courses
or
(c) Qualified at ABET level 4 (General Education Certificate)

Performance Outcomes :
1. Start, stop and conduct other equipment related procedures or operations.
2. Adjust or set process variables.
3. Perform a product change over.
4. Extract information from process documentation and summarise output and incidents in report form.
5. Recognise and rectify common problems.

Assessment criteria :
1. Job preparation
   - 1.1 Job requirements determined from the applicable documentation;
   - 1.2 Calculations relating to inputs completed;
   - 1.3 Procedure for the job planned.
2. Process set up and running according to standard
   - 2.1 Set up calculations required by the process;
   - 2.2 Completed checks, tests and reports required at the conclusion of the procedures;
   - 2.3 Product and process meet specifications;
   - 2.4 Procedures completed within the standard time.
3. Job completion
   - 3.1 Calculations related to output completed;
   - 3.2 Oral and written summaries and reports of incidents and problems completed;
   - 3.3 Evidence of a systematic problem solving method to rectify common production-related faults during the course of setting up and running.
4. Correct use and care of hand or power tools, instruments, tests and safety equipment.

Underpinning Knowledge :
1. Materials to be processed: properties and how they are affected by processing.
2. Process and process equipment: interrelationship of variables, pattern or format of machine-related procedures and common practice.
3. Key quality checks and tests; key points in the care and maintenance of equipment and materials; key hazards and safety procedures and practices.
4. Key points to measure and record for reports; correct format for reports.

ILLUSTRATIVE UNIT STANDARD Page 2 of 2

OVERSEEING MACHINERY FOR VOLUME OR HIGH SPEED MANUFACTURING PROCESS

Range Statements :

1. Candidates are not expected to develop their own process variables from scratch.
2. Only in exceptional circumstances should the assessment be carried out on simulators: a normal production environment should be a prerequisite.
3. The mere completion of the task is not evidence of capability: a candidate should appear confident, deal with unforseen events and be capable of explaining the reason(s) for following particular procedures and the principles which underpin the process.
4. Theoretical knowledge should be assessed in the context of the activities and not simply as a written or oral test.
5. The production output should meet product or customer specifications in all respects and not be produced simply for the sake of the assessment.

Moderation :

This unit could be moderated by the Engineering and Manufacturing Production Processes National Standards Body nominee.

ILLUSTRATIVE UNIT STANDARD Page 1 of 3

SAQA Logo	**Language Communications at Adult Basic Education and Training Level 3**	**NSB** **ID / Logo**

Unit number : ABET3LANG101		**Field**	Communication Science and Languages
Level : Adult Basic Education and Training Level 3		**Issue Date**	1 August 1995
Credit : 80		**Expiry Date**	1 August 1996

Capability :

A candidate at this level is capable of USING LANGUAGE TO COMMUNICATE IN A RANGE OF DIFFERENT CONTEXTS, THROUGH A RANGE OF DIFFERENT METHODS AND FOR A NUMBER OF DIFFERENT PURPOSES.

This unit is a general education unit in the Fundamental Category.

Entry Assumptions:

ABET2LCOM in the same language.

Performance Outcomes :

1 Read and respond to a range of text types:
  - 1.1 Recognise purpose, audience and source of text;
  - 1.2 Use appropriate reading strategies to suit the text type and task/activity;
  - 1.3 Show comprehension of surface meaning of the text by responding to *who*, *what*, *where* and *when* questions;
  - 1.4 Identify less obvious meanings of the text;
  - 1.5 Respond to textual and visual features of the text which help to convey information;
  - 1.6 Show understanding of textual organisation and sequencing;
  - 1.7 Relate the contents of the text to personal experience or prior knowledge of the subject of the text;
  - 1.8 Give an opinion on the text.

2. Write a range of text types:
  - 2.1 Produce a text type specifically required by the writing task/activity;
  - 2.2 Present content relevant to the writing task/activity;
  - 2.3 Use tenses appropriate to the communicative nature of the writing task/activity;
  - 2.4 Use language functions appropriate to the communicative nature of the writing task/activity;
  - 2.5 Arrange and structure text using sentences, paragraphs and sequencing so that ideas are adequately conveyed;
  - 2.6 Show familiarity with writing conventions specific to text types and related writing tasks / activities;
  - 2.7 Show evidence of planning, drafting and editing;
  - 2.8 Use punctuation and spelling so that a reader can follow the text;
  - 2.9 Present text legibly.

3. Engage in a range of speaking and listening interactions:
  - 3.1 Take part in a social interaction;
  - 3.2 Give and get information;
  - 3.3 Express and understand ideas and opinions;
  - 3.4 Express and respond to feelings and emotions;
  - 3.5 Express and respond to suggestions, offers and requests;
  - 3.6 Ask for speech to be reworded or repeated in misinterpretation occurs, and repeat or reword speech if asked to do so.

Language Communications at Adult Basic Education and Training Level 3

Assessment criteria :
The evidence must demonstrate:

1. For reading:
   - 1.1 Recognition of purpose, audience and source of text;
   - 1.2 Use of appropriate reading strategies to suit the text type and task/activity;
   - 1.3 Comprehension of surface meaning of the text through responses to who, what, where and *when* questions;
   - 1.4 Identification of less obvious meanings of the text;
   - 1.5 Understanding of textual and visual features of the text which help to convey information;
   - 1.6 Understanding of textual organisation and sequencing;
   - 1.7 Ability to relate the contents of the text to personal experience or prior knowledge of the subject of the text.

2. For writing:
   - 2.1 Production of a text type specifically required by the writing task/activity;
   - 2.2 Presentation of content relevant to the writing task/activity;
   - 2.3 Use of tenses appropriate to the communicative nature of the writing task/activity;
   - 2.4 Use of language functions appropriate to the communicative nature of the writing task / activity;
   - 2.5 Understanding of how text is arranged and structured using sentences, paragraphs and sequencing so that ideas are adequately conveyed;
   - 2.6 Familiarity with writing conventions specific to text types and related writing tasks / activities;
   - 2.7 Processes of planning, drafting and editing;
   - 2.8 Use of punctuation and spelling so that a reader can follow the text;
   - 2.9 Legibility of text.

3. For speaking and listening:
   - 3.1 Taking part in social interaction;
   - 3.2 Giving and getting information;
   - 3.3 Expressing and understanding ideas and opinions;
   - 3.4 Expressing and responding to feelings and emotions;
   - 3.5 Expressing and responding to suggestions, offers and requests;
   - 3.6 Asking for speech to be reworded or repeated in misinterpretation occurs, and repeating or rewording speech if asked to do so.

Underpinning Knowledge :
Learners will be expected to know:

1. that language is a tool for communicating and interacting for a number of purposes;
2. that this can take place through reading, writing, speaking and listening;
3. basic language structures and grammatical conventions;
4. ways in which speech and textual conventions differ;
5. variety of styles and presentation formats for speech and for texts;
6. that context, ie. audience and purpose of communication, determines styles and presentation formats;
7. that people use written and spoken language to affect and influence others;
8. that there are different ways of learning a language;
9. that there are different ways of using language to learn.

ILLUSTRATIVE UNIT STANDARD

Page 3 of 3

Language Communications at Adult Basic Education and Training Level 3

Range Statements :

1. For reading:
Performance to be elicited through reading tasks in test assessments or through course and project work linked to the context of learning or experience. Texts and tasks to elicit responses are bounded by the length and language appropriate to this level: ie. they should be without specialist or complex vocabulary and presented in simply structured prose.

2. For writing:
Performance to be elicited through various writing tasks, through test assessment or through course and project work linked to the context of learning. This involves the writing of simple text with language, form and content appropriate to purpose or task. Language structures, main tenses, spelling and punctuation should be used to the extent that the main ideas are communicated correctly.

3. For speaking and listening:
Vocabulary at this level will be fairly basic and straightforward. Although usage of language structures may not always be correct, there should be enough clarity for shared communication to take place. Validated through oral assessment tasks of various kinds.

Moderation :

1. External examination through examining bodies such as provincial authorities or assessment agencies.
2. Guidelines given for internal assessment and external moderation thereof by accredited assessment authorities or agencies.
3. External moderator body nominated by the Communications Sciences and Languages National Standards Body and accepted by other national standards bodies, subject to approval by the South African Qualifications Authority.

CHAPTER 8

FIVE STAGES IN GETTING STARTED

We have discussed the concepts and some of the procedures which may inform the working of the National Qualifications Framework. In this chapter, we outline five stages to help people start defining new qualifications and unit standards in their fields of learning.

Standards for the *National* Qualifications Framework cannot be written at *local* level. At the end of the day, however, they will have to be *implemented at local level* and will have to meet specific needs. It is therefore essential that the needs of people and places represent both the starting point and the finishing point of the development of the National Qualifications Framework. Between the start and the finish, however, a national process needs to take place if the Framework is to achieve the broader objectives outlined in this book. It is therefore proposed that the formulation of qualifications in a field of learning - and the associated unit standards - be subdivided into five stages, illustrated below[24]:

Stage 1:	**Stage 2:**	**Stage 3:**	**Stage 4:**	**Stage 5:**
The preparation phase	Set up a National Standards Body	Write Standards	Recommend qualifications and moderators	Contextualise learning for specific purposes

In time, once the South African Qualifications Authority is established, the process will clarify. The South African Qualifications Authority will develop a clear notion of the broad fields of learning in which it needs to establish National Standards Bodies, and will publish the systems of registration and accreditation it wishes to apply. Once these are in place it will be possible formally to register National Standards Bodies and/or Qualification Councils, and the standards and qualifications they generate. At the time of writing this book, registration is not yet possible. What is presented below is a possible "line of march" for those that would like to get started, and who would like ultimately to fit into the new national system.

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[24] Note: In some cases it may be possible to change the relationship between steps 1 and 2. For example, if a sufficiently representative range of people have already identified the need to set standards within a field of study across a wide range (such as Engineering and Manufacturing Processes together with the Engineering Profession), it may be possible to identify the National Standards Body first and then initiate structured preparation by all participants. However, it is assumed, for the purposes of this discussion, that this is not the norm.

STAGE 1: THE PREPARATION PHASE

As one can see from the five stages listed above, the development of the National Qualifications Framework is a complex task. Stakeholder participation in the process is essential if the final result is to be widely accepted. The first step in the preparation phase is to establish legitimate co-ordinating structures in each field or sector. These should include not only the "employer parties" and provider groupings, but also the organised voice of learners. In order to facilitate the smooth running of the preparation phase, it will probably be necessary to appoint a coordinator acceptable to all the parties.

Once such a group is established, the question that inevitably gets asked is "where do we start?". There are a number of ways in which the task can be approached, and it may be helpful to work through the sequence of questions provided below. This will help any group approach its preparation systematically.

Key questions to ask and answer at the start

1. *What is the context of learning?*

   Answers here will deal with issues such as:
   - general situation and organisational analysis (including external context);
   - existing curricula, training design and development assumptions;
   - specific work environment description (work flow or process analysis);
   - description of the qualifications and/or occupations currently used;
   - description of the assumptions of the stakeholders;
   - general development programmes within the specific context.

2. *What is the purpose of learning in this context?*

   Learning frequently has different purposes, depending on the point of view of different stakeholders. These need to be described. Here are some examples:
   - career paths and improved quality of working life for workers;
   - flexibility and productivity for employers;
   - successful learning achievements for learners;
   - opportunities for learners to progress;
   - develop the skills of a community so that they are better able to take control of their own development programmes.

3. *What constitutes competent performance in this context? And are there different levels of competent performance that can be identified? Are new levels of competence envisaged in future? If so, what will competent performance at these new levels entail?*

The answers to these questions may be related to *occupation* or *qualification*. Examples of new levels of competent performance may include:

- Qualification: Different levels of Adult Basic Education and Training which lead to a General Education Certificate for adults in future.
- Occupation: Occupational progression which identifies new steps from "sweeper to engineer" or "porter to doctor" or "homeworker to community health worker".

4. *Within each of the existing or envisaged levels of competent performance, is it possible broadly to identify activities indicative of areas of capability required for overall competence?*

An activity is not an isolated task, but rather an integrated set of tasks which can be meaningfully assessed. These are commonly referred to as roles or functions which are performed differently at different levels of competence. In general this includes preparing for, carrying out and completing work or a learning exercise which is "fit for purpose" at a particular level. For each activity it is useful to make explicit the assumptions about the learners' literacy, numeracy and other learning skills. These assumptions will sometimes need to be addressed before the capability can be achieved.

The question asks us to identify "activities indicative of areas of capability required for overall competence". These could include:

- **Roles within an occupation**. For example, Education, Training and Development (ETD) practitioners need to be capable of assessing learning, facilitating learning in groups or with individuals, managing the learning environment and so on. Each of these is an activity which can be meaningfully assessed at different levels of competence.
- **Functions within a process**. Manufacturing people need to be capable of monitoring and improving the work process. This includes start-up, loading, maintaining quality output, identifying and acting on faults, and unloading - all

within required quality and health and safety specifications. This function can be meaningfully assessed at a number of levels - from basic operator to "supervisor" to industrial engineer.

- **Learning capabilities.** In the higher education context, the capability to research, analyse and synthesise is a capability which is valued in its own right. Other capabilities include reading, analysing and generating original comment on significant texts, for example in literature, in philosophy or in sociology.

The challenge is for these roles and functions to be described as generally as possible, even in the early stages of preparation. Too much detail is inappropriate. There are a number of methodologies which have been developed which can assist with the identification of common roles or functions across contexts which seem to be different.

Some of these are:

In a predominantly educational context:

- progression analysis (to determine the broad intellectual development path);
- principle analysis (to determine from what context "theory" may be derived);
- learning hierarchy (to determine the capabilities likely to ensure successful learning and progression);
- discipline assessment (to determine where the academic discipline is currently in worldwide scholarship);

In a predominantly work place or development context:

- job family or occupation analysis (to identify roles and outputs, and performance or output standards);
- process analysis (to identify the components of the main process and evident "general" capabilities required for success);
- critical incident analysis and/or goal analysis (to identify the underpinning broad capabilities rather than run-of-the-mill tasks);
- progression analysis (to identify the anticipated progression e.g. of "sweeper to engineer" and the development of capability (including understanding) at each stage;
- hierarchy analysis or even the analysis of international standards (to determine the relationships between component skills and the capability they represent).

For an occupational group e.g. professional, craft, para-professional:

- analysis of desired competence at current (and future) levels of qualification.

In the end, these methodologies are simply tools to assist people to think systematically about their situation.

Examples of activities which indicate areas of capability:

Below are two examples drawn from different sectors (industry and general education) which show the results of the process outlined above. The first example is drawn from the manufacturing industry:

Activity : Demonstrating the capability to surface finish[25]

Preparation	Key Steps	Completion
e.g. identify job material; obtain / interpret job instructions; obtain and check parts; obtain tools and equipment; routine inspection / maintenance	- identify job surface condition - perform pre-treatment processes in correct sequence	e.g. store / forward quality finished product; complete / record finished product information; maintain work area

The second example is taken from the general education field:

Activity : Demonstrating the capability to correspond[26]

Preparation	Activity	Completion
Understanding the purpose. Understand how a letter gets to that purpose. Planning the letter (tone, language, recipient, etc)	- draft the letter - measure against purpose, etc.	Address and post the letter

---

[25] The *assumptions* which have been made in this example include the following: The learner has basic reading in language used. The learner can write in a given format. The learner has sufficient knowledge of the working environment to do the activity (e.g. where tools, equipment, etc. are kept). The learner is familiar with the procedures, quality specifications, and health and safety precautions relevant to this activity.

[26] The *assumptions* which have been made in this example are: The learner understands the communicative practice of letter writing. S/he is able to read and write to an appropriate level for the purpose of the letter. S/he demonstrates understanding of social conventions.

5. *Within a given role, function or learning capability, is it possible to identify meaningful levels of progression?*

Within a single, given role or function is it possible to identify meaningful levels of progression which can be assessed and included in different qualifications designed for different purposes? For instance, if an Education, Training and Development (ETD) practitioner needs to acquire the capability to assess learners, at what levels of proficiency is this capability required for, say, a workplace mentor, an industry-accredited assessor, a school teacher, a provincial examiner and so on? When does the "cross-over" from informed self-assessment to the capability of assessing others take place?

6. *What could constitute evidence of the desired capability within the context and at the identified level of competence?*

This question is about being able to distinguish a capable performer *of an activity* within a context at an identifiable level. Reliable evidence of capability needs to address the unfamiliar as well as the familiar situation within the performer's range. Examples of this kind of assessment would be the traditional "set task", e.g. write a letter, finish a surface to the desired quality, drawing from the examples given previously. It may be desirable that such assessments are not simple "one offs", but include several types of ongoing assessment, such as self- and peer assessment, which can be validated by someone authorised to do so.

7. *What would represent evidence of a fully competent person?*

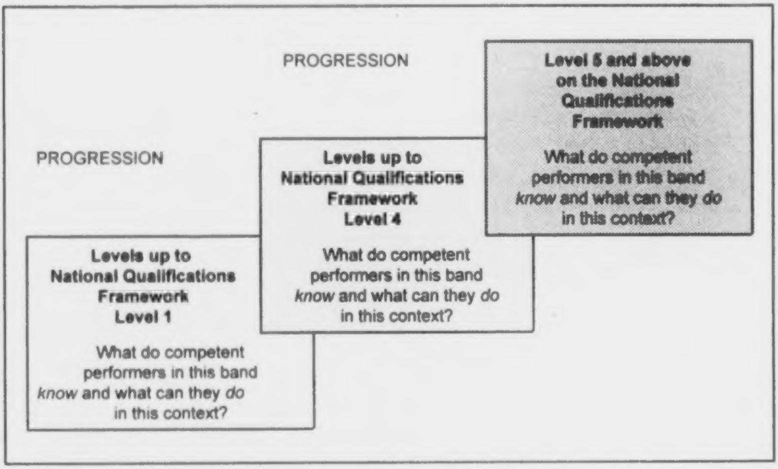
This question is about identifying the individual who is able to *combine discrete capabilities into effective performance* at a given level within the context. Again, such evidence needs to consider the range of situations the person might realistically be expected to encounter. Examples of assessment of this nature can be taken from any professional field, or indeed the traditional trade test, doctoral thesis, final essay or special project.

8. *With a very broad understanding of the levels of the National Qualifications Framework, is it possible to place the desired qualifications on to the Framework?*

Using a very broad understanding of the National Qualifications Framework - where Level 1 is roughly equal to a Standard 7, Level 4 is roughly equal to the old matric and above Level 5 is tertiary education and training - is it possible to place the qualifications envisaged in the National Qualifications Framework bands? There may of course be more than one qualification within a band.

This rough, existing "map" of levels will act as an input into the discussion about progression and complexity that will take place in the standard setting process.

Many organisations, companies, industry training boards, curriculum groupings and provincial authorities have already completed much of this preparation. They need to establish whether they have captured capabilities and competencies, rather than discrete task performance. Working through the eight questions listed above could assist in this process.


PROGRESSION
PROGRESSION
Level 5 and above on the National Qualifications Framework
What do competent performers in this band *know* and what can they *do* in this context?
Levels up to National Qualifications Framework Level 4
What do competent performers in this band *know* and what can they *do* in this context?
Levels up to National Qualifications Framework Level 1
What do competent performers in this band *know* and what can they *do* in this context?

STAGE 2: SET UP A NATIONAL STANDARDS BODY

Standards writing is not an exercise that is appropriately carried out within a single company, institution, faculty, or community. The very notion of a *national* system is that the learning described should be relevant across the country. Where relevant, such descriptions should also be comparable to international norms. *The wider the range of agreement, the greater will be* *the portability of the standards written*: indeed, the extent of the portability is given by the extent of agreement reached in the standard writing process.

The intention of the National Qualifications Framework is to establish National Standards Bodies which will be recognised by the South African Qualifications Authority. Their function will be to write and then register national standards and make recommendations for national qualifications. The South African Qualifications Authority may also establish separate Qualifications Councils in those areas of education and training which cut across a number of fields of learning. These may well be linked to stakeholder forums such as the Adult Basic Education and Training Stakeholder Forum, currently constituted under the national Department of Education.

At the time of writing, the South African Qualifications Authority has not yet been established and current process of writing standards is thus in an interim stage. Nevertheless, the challenge is to bring together all the interest groups which have identified similar roles, functions or learning capabilities for learners, and to establish an Interim National Standards Body under an available organisational umbrella (such as the National Training Board or Department of Education, for example). Once the South African Qualifications Authority is established and has clarified "the rules of the game", the process will be much simpler.

This book anticipates that National Standards Bodies will be large, generic bodies which seek to find coherence, progression and flexibility across a very wide field of learning. The categories being considered are the ones previously outlined in Chapter 6. National Standards Bodies (NSBs) could be established at either of the levels on this list, as is shown below:

NSB/s for Agriculture and Nature Conservation
- Agriculture and renewable resources (Agriculture, Forestry, Fisheries)
- Nature conservation
- Horticulture

NSB/s for Arts and Artistic Crafts
- Visual arts
- Performance arts (Stage, Musical)

NSB/s for Business, Commerce and Management Sciences
- Financial
- Administration
- Commercial practice
- Property
- Marketing
- Leadership, management and supervision

NSB/s for Communication Science and Languages
- Communication
- Languages

NSB/s for Education, Training and Development
  - Education
  - Training and development

NSB/s for Engineering and Manufacturing Processes
  - Design, construction and maintenance
  - Production and manufacturing processes
  - Mobile equipment and materials handling
  - Mining
  - Computer sciences and information technology

NSB/s for Human and Social Sciences
  - Histories
  - Geographic / Economic
  - Individuals and societies
  - Religions

NSB/s for Law, Military Science and Security
  - Law
  - Military science and security

NSB/s for Mathematics
  - Pure mathematics
  - Applied mathematics

NSB/s for Medical Sciences, Health and Social Services
  - Medical and dental (Animal; Human {medicine and dentistry; lab, care and social services})
  - Sport and recreation
  - Food and nutrition
  - Fire and safety

NSB/s for Natural and Life Sciences and Technologies
  - Natural sciences
  - Life sciences

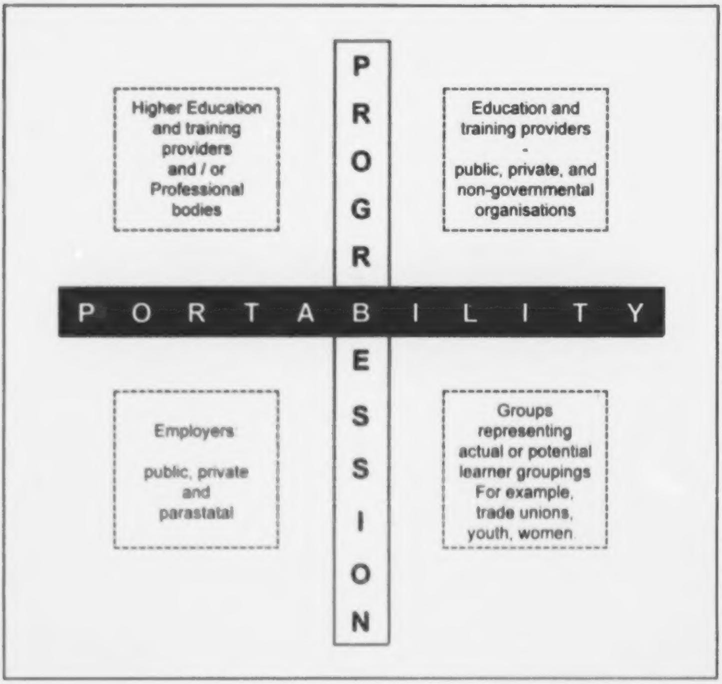
NSB/s for Utility Services
  - Hospitality and tourism
  - Beauty technologies
  - Publishing and book binding
  - Archiving and information storage
  - Wholesale and retail

Clearly extensive debate is still needed in respect of this list of National Standards Bodies, but it is suggested that a *tree-like structure is preferable to a random structure* of hundreds of standard setting bodies which inevitably overlap. Not only is a random array of bodies inefficient; it would also restrict the portability of the learners, and probably restrict their progression too, as bodies could divide on the basis of bands of levels and, in this case, would not address movement up through the levels. However, this approach has implications for the level of generality that is appropriate for unit standards and qualifications. Clearly the wider the range of contexts that standards have to cover, the more generally they will have to be written. This is desirable as it will enhance the ability of particular institutions, organisations and companies to contextualise the material to suite their specific needs.

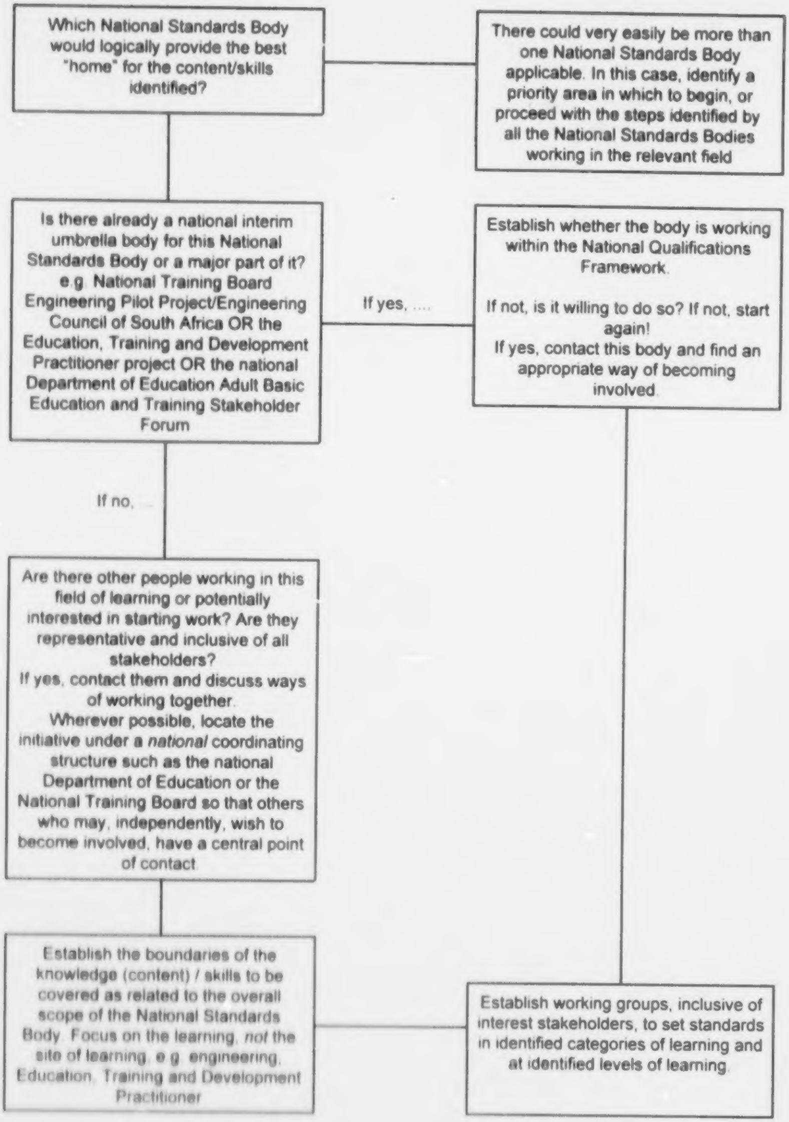
Two principles underlie the proposed composition of National Standards Bodies:

- First, the principle of portability means that people from different contexts need to participate in setting the standards. This means, for example, that both employers and representatives of learner groups, such as trade unions and youth, need to be represented.
- The principle of progression from lower to higher levels of learning, means that people from different levels of the learning spectrum need to participate in setting standards.

Each National Standards Body is thus likely to incorporate, at least, the following groups of participants.

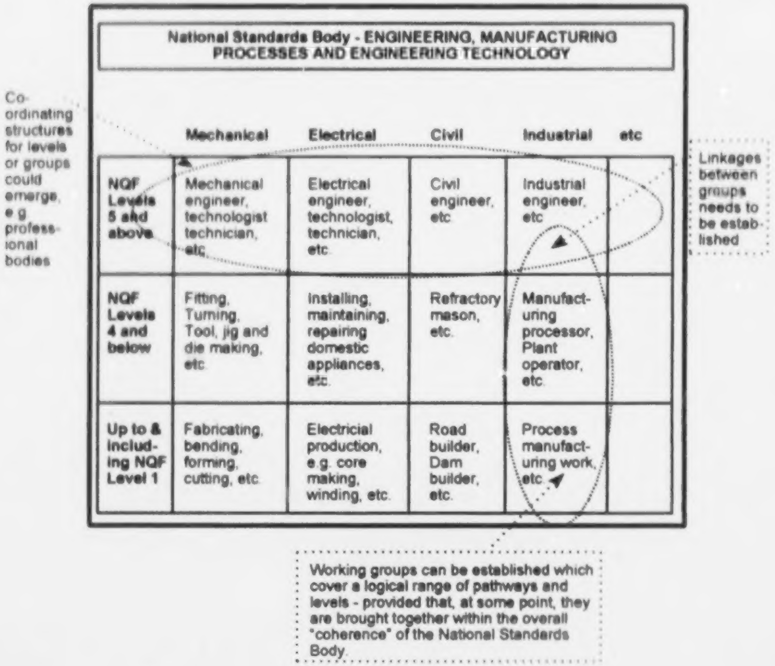

PROGRESSION
PORTABILITY
Higher Education and training providers and / or Professional bodies
Education and training providers - public, private, and non-governmental organisations
Employers public, private and parastatal
Groups representing actual or potential learner groupings For example, trade unions, youth, women

Until National Standards Bodies are actually constituted (which will only happen after the South African Qualifications Authority has been established), any group or sector can start the process of discussing standards, provided it finds others with whom to co-operate. The approach and the process can be summarised as follows:


Which National Standards Body would logically provide the best "home" for the content/skills identified?
There could very easily be more than one National Standards Body applicable. In this case, identify a priority area in which to begin, or proceed with the steps identified by all the National Standards Bodies working in the relevant field
Is there already a national interim umbrella body for this National Standards Body or a major part of it? e.g. National Training Board Engineering Pilot Project/Engineering Council of South Africa OR the Education, Training and Development Practitioner project OR the national Department of Education Adult Basic Education and Training Stakeholder Forum
If yes, ...
Establish whether the body is working within the National Qualifications Framework.
If not, is it willing to do so? If not, start again!
If yes, contact this body and find an appropriate way of becoming involved.
If no, ...
Are there other people working in this field of learning or potentially interested in starting work? Are they representative and inclusive of all stakeholders?
If yes, contact them and discuss ways of working together.
Wherever possible, locate the initiative under a *national* coordinating structure such as the national Department of Education or the National Training Board so that others who may, independently, wish to become involved, have a central point of contact.
Establish the boundaries of the knowledge (content) / skills to be covered as related to the overall scope of the National Standards Body. Focus on the learning, *not* the site of learning, e.g. engineering, Education, Training and Development Practitioner
Establish working groups, inclusive of interest stakeholders, to set standards in identified categories of learning and at identified levels of learning.

Here are two examples of how a National Standards Body might establish and coordinate working groups in its field of learning:

Example drawn from the Engineering Manufacturing Pilot Project:



National Standards Body - ENGINEERING, MANUFACTURING PROCESSES AND ENGINEERING TECHNOLOGY

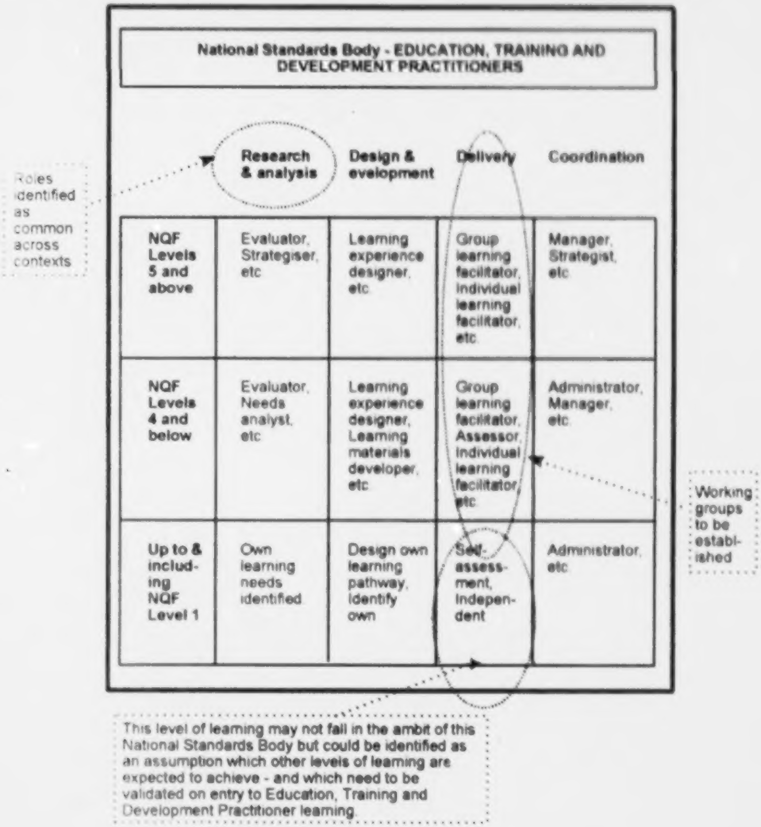
	Mechanical	**Electrical**	**Civil**	**Industrial**	**etc**
NQF Levels 5 and above	Mechanical engineer, technologist technician, etc	Electrical engineer, technologist, technician, etc	Civil engineer, etc	Industrial engineer, etc	
NQF Levels 4 and below	Fitting, Turning, Tool, jig and die making, etc	Installing, maintaining, repairing domestic appliances, etc.	Refractory mason, etc.	Manufacturing processor, Plant operator, etc.	
Up to & including NQF Level 1	Fabricating, bending, forming, cutting, etc	Electricial production, e.g. core making, winding, etc.	Road builder, Dam builder, etc.	Process manufacturing work, etc.	

Co-ordinating structures for levels or groups could emerge, e.g. professional bodies

Linkages between groups needs to be established

Working groups can be established which cover a logical range of pathways and levels - provided that, at some point, they are brought together within the overall "coherence" of the National Standards Body.

Example from the Education, Training and Development Practitioner Pilot Project:



National Standards Body - EDUCATION, TRAINING AND DEVELOPMENT PRACTITIONERS

	Research & analysis	**Design & development**	**Delivery**	**Coordination**
NQF Levels 5 and above	Evaluator, Strategiser, etc	Learning experience designer, etc	Group learning facilitator, individual learning facilitator, etc	Manager, Strategist, etc
NQF Levels 4 and below	Evaluator, Needs analyst, etc	Learning experience designer, Learning materials developer, etc	Group learning facilitator, Assessor, individual learning facilitator, etc	Administrator, Manager, etc
Up to & including NQF Level 1	Own learning needs identified	Design own learning pathway, identify own	Self-assessment, Independent	Administrator, etc

Roles identified as common across contexts

Working groups to be established

This level of learning may not fall in the ambit of this National Standards Body but could be identified as an assumption which other levels of learning are expected to achieve - and which need to be validated on entry to Education, Training and Development Practitioner learning.

STAGE 3: WRITING STANDARDS

Writing unit standards is essentially a process of describing the capabilities required within an identified role, function or learning activity at a specified level of competence *Capabilities are not discrete tasks: they are demonstrations of underlying abilities (like problem- solving, decision-making and communication) being applied to a given body of knowledge in a way* *which aims to achieve a desired purpose or performance. In the terms developed in this book, a capable performer is not only someone able to achieve or perform, but someone who is also able to keep learning, as the context changes or even where it "goes wrong".*

As discussed in the last Chapter, the authors of this book are suggesting that the following format be used for unit standards :

<table>
<tr><td colspan="2">UNIT STANDARD Page of</td></tr>
<tr><td colspan="2">SAQA
Logo
Unit Title
NSB
ID / Logo</td></tr>
<tr><td>Unit number
Level
Credit</td><td>Field
Issue Date
Expiry Date</td></tr>
<tr><td colspan="2">Capability
A candidate at this level is capable of "... ing"</td></tr>
<tr><td colspan="2">Entry Assumptions
Learning assumed to be in place before this unit is commenced</td></tr>
<tr><td colspan="2">Performance Outcomes
What does a candidate at this level need to demonstrate?
A person at this level needs to ....
Verb + Noun + Qualifier (if required)</td></tr>
<tr><td colspan="2">Assessment criteria
What will count as evidence for credit? ....
Noun + Verb + Qualifier
(prompted by questions drawn from the abilities used to achieve capability at this level)</td></tr>
<tr><td colspan="2">Underpinning Knowledge
What knowledge can learners reasonably be expected to draw on?
A person at this level needs to know ....</td></tr>
<tr><td colspan="2">Range Statements
A general guide of the scope, context and level being used for this unit standard</td></tr>
<tr><td colspan="2">Moderation
Body (or criteria) nominated by the National Standards Body to verify assessments conducted by providers or Education and Training Qualifications Authorities</td></tr>
</table>

Many different approaches have been taken in pilot projects, as illustrated in Chapter 9. The format presented above is derived from the thinking that has informed the process of the writing of this book. Clearly the final decision can only be able to be taken by the South African Qualifications Authority.

STEP ONE: **At a specified level of competence, how does one arrive at competency statements?**

The "preparation phase" information developed during Stage One now needs to be brought together and analysed by the various stakeholders. The purpose of this analysis is to identify commonalities across the different contexts, and generate a common "classification" system for the competencies and capabilities required within a particular field at a particular level of competence.

It often happens that people begin this process by asserting the absolute uniqueness of their own context. In fact, they tend to resist any attempt to find such commonalities. However, if learners are to achieve portable qualifications, it is necessary that such commonalities are found. It is often useful to move to a higher order of generality to generate such commonalities. Examples of how such commonalities were developed for engineering and for education, training and development practitioners are given earlier, at the end of Stage Two.

PRACTICAL HINT

It may be helpful to use cards, sticky "post-its" or cut pieces of paper to prepare lists of capabilities. This enables people to brainstorm their ideas. Write each idea on a card and then arrange the cards into "families". Finally, the group needs to agree on a common way of describing the "families", recalling that the authors of this book recommend that when one is describing capabilities, a common format is used. The suggested common format is:

"A person at this level is capable of ....ing."

In identifying levels of competence and associated capabilities, it is likely that slightly different perspectives will be brought to bear in the following three contexts:

- In an industrial or work environment, it may be necessary to focus on desired worker capabilities, rather than on the particular machine or product/service that they produce. A radical rule which was developed in the engineering industry - no machine names, no product names - helped to shift the focus onto learners and their desired capabilities to be developed. It is often helpful to find a benchmark for a level which has already achieved national recognition, like the competence of a trades person or professional. However, there are many gaps, and it may not be possible to do this in all cases. New categories, such as para-professional or production artisan, may need to be developed.

- In a development environment it is useful to identify existing relevant recognised capabilities (e.g. accountancy - matric level). These can be used to establish benchmarks against which new levels may be developed and described. However, it is inevitable, that in many cases, appropriate qualifications will not exist and will have to be generated through discussion and agreement. Even where qualifications do exist, it may be that they are generally at too high a level and need subordinate levels, e.g. community health worker. Once qualification levels have been identified, then a National Standards Body needs to establish the capabilities required to achieve that qualification.

- In a full-time education environment, a focus on learning capabilities or roles will be necessary. For example, it may be helpful to ask questions such as "what do we expect a historian at this level to be able to do or demonstrate?" (e.g. the ability to collect, organise and evaluate information) rather than focus on a particular time and place (historical event).

The relevant National Standards Body will have to agree on which of the capabilities described are common across one, two or more of the contexts within their field of responsibility. Identifying commonalities will lay the basis for writing generic capability statements.

STEP TWO: Having reached initial agreement on capability statements, how does one arrive at performance statements?

Once initial agreement has been reached on capability statements, the National Standards Body (or working group) will need to address each of these statements, in turn. In so doing, they will have to address the following question:

"What are the kinds of things that people will have to demonstrate or do in order to be assessed as capable at this level?"

People engaged in looking at this question will need to take account of routine as well as non-routine conditions. They will also need to consider the management of performance and not only the actual demonstration or performance itself. In respect of managing performance, they will need to look at issues of collecting information, making decisions and arrangements in respect of that information, checking decisions against the initial information, and so on.

It is useful to think of a real person actually performing capably at the particular level in question. When thinking of a "real person" it is important to think not only of what their heads and hands are doing, but also of the kinds of social interactions that they are likely to be engaged in during the performance. For example, who does the person have to communicate with? In what ways do they have to communicate (writing, speaking, hand signals, and so on). For what purpose do they have to communicate?

PRACTICAL HINT

The broader the questions that get put forward during this stage, the greater the possibilities that the final unit standard will cover a full capability and avoid the pitfalls of becoming a "shopping list" of content or task areas or a collection of behaviouristic statements.

The authors of this book have suggested that performance statements are written in the following format:

VERB + NOUN + QUALIFIER

Examples of such performance statements would be:

- *Generate routine reports*
- *Monitor production machine*
- *Write a history essay which demonstrates an understanding of period, conflicting interests and social and economic conditions.*

Please note that when writing such performance statements it will happen that the initial capability statement is seen as having been too broad or too narrow in its first conceptualisation. For example, some of what was initially thought to be a performance turns out to actually be a capability in its own right, alternatively, what was initially perceived as being a capability turns out to be a performance statement within a broader capability.

An iterative process of reflection and revision will inevitably characterise the work of the National Standards Bodies and their associated working groups.

STEP THREE: Having reached initial agreement on performance statements, how can one arrive at assessment criteria?

This category on the unit standard is about providing the assessor (Education and Training Qualifications Authority or assessment agency) with guidelines as to the kinds of evidence that need to be presented and demonstrated in order for credit to be awarded. The focus should be on what the assessor should prompt for and what criteria should be used to judge demonstrations of capability. The assessment task set will thus have to provide the candidate with an opportunity to demonstrate the listed criteria.

The starting point for arriving at assessment criteria is a debate around the performance statements. In other words, how will an assessor be able to know or judge when a candidate or learner is "able to ...." (for example, monitor a machine, write an essay). More concretely, the assessment criteria will have to spell out what it is that the assessor will be looking for.

The authors of this book suggest that assessment criteria are written in the following format:

NOUN + PASSIVE VERB + QUALIFIER (as indicator of level of complexity)

Examples of such assessment criteria could be:

- *information is researched and analysed*
- *materials are checked against quality standards*
- *social conditions are described in terms of key social groups, their relative societal status and well-being.*

The way in which these assessment criteria are elicited goes to the heart of the propositions presented in this book, namely, that performance is the use of abilities in a particular context.

PRACTICAL HINT

A possible starting point for looking at abilities is to survey the abilities or generic competencies that have been discussed in a range of documents such as Appendix F in the National Training Strategy Initiative report, the Mayer Competencies, the SCANS listing from the United States of America or the Alverno College abilities. Two of these lists have been summarised in the table on the following page to provide an easy reference starting point.

National Training Strategy Initiative report : Generic Competencies	The Alverno College Abilities
Thinking about and using learning processes and strategies	Global perspectives
Solving problems and making decisions	Problem solving
Planning, organising and evaluating activities	Valuing
Working with others as a member of a team/ group/organisation/community	Social interaction
Collecting, analysing, organising and critically evaluating information	Analysis
Communicating ideas and information	Communication
Participating in civil society and democratic processes through understanding and engaging with a range of interlocking systems (legal, economic, political, social)	Effective citizenship
Using science and technology critically to enhance control over the environment in a range of fields and contexts	
Applying mathematical concepts and tools	
Understanding and using the core skills, concepts and procedures that underlie the domains of social and human sciences, natural sciences, arts, language and literature	Aesthetic response

Abilities which are deemed critical (that is, needing to be foregrounded) for the capability and performance within a particular unit standard, can then be identified. Once identified, the ability can then be turned into a question, as illustrated in the following examples:

- *Communication*: in this unit standard it is critical for the performer to be able to communicate with people. Questions can then be posed as follows: "In this context, at this level, who must the capable performer *communicate* with? Why? In what way? In what language?" and so on. Examples could be:
  - In an industrial environment: "Verbal communication with customers is conducted politely and demonstrates product knowledge."
  - In a management or lecturing environment: "Public presentations are made in English using overhead projector slides or other effective communication aids to an audience being introduced to the material for the first time."

- *Problem solving*: in this unit standard it is critical for the performer to identify and solve problems. Questions could then be posed as follows: "In this context and at this level what kinds of problems would a capable performer be able to identify and address correctly?"
    - *In an industrial environment: "Material flaws are identified from visual or other* sense signals and reported timeously to the team leader/supervisor."
    - In a social science environment: "Inconsistencies in oral histories are identified and analysed."

Another way of developing assessment criteria would be for the standards writing group to consider the components of competency that are discussed in this book at the beginning of Chapter 5. These include:

- *Routine performance*: what would a competent performer be able to routinely do?
- *Routine task management*: what sequencing, prioritising and people/time/resource management is required by a competent performer at this level?
- *Non-routine or exigency intervention or management*: what is expected of a competent performer at this level if things go wrong, change or need improvement?
- *Role performance*: what is the social context in which the competent person is performing at this level? With whom must the person communicate? In what ways? For what purposes? and so on.

An example of the assessment criteria developed for the capability *Generating Reports*, as outlined in Chapter 7, is reproduced below to illustrate how assessment criteria are linked to performance statements:

Capability: A candidate at this level is capable of GENERATING REPORTS.	
Performance outcomes:	**Assessment criteria:**
2. Generate written reports	2.1 Information is presented using the required format and terminology. 2.2 Reports are presented on time. 2.3 Special purpose reports are presented to communicate problems and make recommendations - where problems are of a predictable nature. 2.4 Reports are acceptable to the writer and the recipient.

STEP FOUR: **Having reached initial agreement on performance statements and assessment criteria, how can one arrive at underpinning knowledge?**

This is the easy part of the task. Underpinning knowledge refers to the things that people need to know in order to be able to perform. For example, how can the performer relate to the theories, traditional approaches, company or institutional procedures, common formats and conventions that are related to the particular performance and capability associated with this unit standard. There are some examples of underpinning knowledge in the illustrative units which are given at the end of Chapter 7. It should also be noted that there is seldom one "underpinning knowledge". Rather, lists of underpinning knowledge are usually generated.

It is important to stress that *unit standards are NOT about prescriptive curricula*. The underpinning knowledge is referenced to underpin the necessary content learning which contributes to competent performance. The references to "underpinning knowledge" need to be as general as possible to allow for innovation and contextualisation.

STEP FIVE: **Having reached this point, how can one then arrive at range statements?**

Range statements are probably best understood as "further notes" which help to clarify the level of complexity, common sites of application, range and depth of the required performance. Range statements may well allow standards to "grow" with experience, a form of "case law".

Again, examples of range statements are given in the illustrative unit standards at the end of Chapter 7.

STEP SIX: **Which body and/or criteria can be nominated to oversee the assessment decisions of others and ensure that a common interpretation of assessment criteria is maintained?**

The final step in the writing of the unit standard is to examine the question of how to ensure against the "standards drift" noted in Chapter 6. The issues of nominating moderation criteria and/or specifying moderating bodies has to be addressed here. Clearly, there will be differences in approach depending on the field and level of learning in and at which the unit standard is being developed. Different scenarios were sketched for the general and further education and training bands and the higher education and training band in Chapter 6.

Structures associated with these different bands are noted in Chapter 10. Please refer to these chapters for further information.

STAGE 4: RECOMMENDING QUALIFICATIONS

A qualification is primarily a meaningful clustering of units of capability to achieve a specific competence or purpose which is nationally recognised (if the qualification is to be registered by the South African Qualifications Authority). The National Qualifications Framework imposes a second "purpose" on all qualifications: the requirement that all qualifications also, simultaneously, lay the basis for further learning. This requirement will underpin the principles of progression and lifelong learning.

Nationally recognised qualifications will need to be recommended by national bodies. These may be National Standards Bodies (or meaningful sub-sets of these such as industry groupings for *industry qualifications* or professional bodies for *professional or para-professional qualifications*) or they may be separate bodies with the specific function of establishing rules of combination for general qualifications, the Qualifications Councils proposed in Chapter 10.

Whichever bodies eventually perform this function, they will all have to work within broad guidelines established by the South African Qualifications Authority - guidelines which are likely to impose the requirement that the qualification should equip the learners to continue learning after the achievement of the specific qualification[27].

Associated with all qualifications will be the requirement for some form of *integrative assessment* which essentially asks if the learner is able to combine the range of identified capabilities together into competent performance. The nature of the integrative assessment will be defined by the purpose of the qualification, for example, a trade test, a doctoral thesis and viva, professional registration and so on.

Arriving at a national qualification will probably require the completion of specified unit standards - either on a compulsory basis or on the basis of drawing from banks of units which constitute an optional bank. Outlines of compulsory and optional banks for the different levels of the National Qualifications Framework are given in Chapter 7. However, in order to meet context-specific purposes, and indeed to promote creativity and innovation, "free choice" units will also probably be permitted under the umbrella of national qualifications. As outlined earlier, the South African Qualifications Authority will also impose an "overlay" requirement - namely that the learner is equipped to learn further after the qualification.

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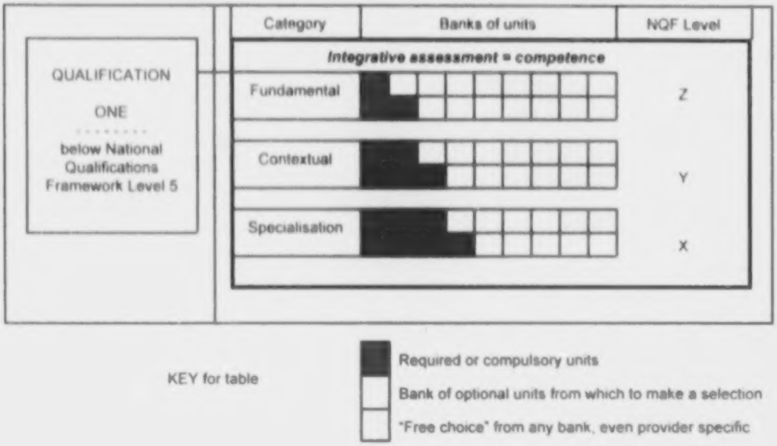
[27] A "proxy" for this requirement could be the "fundamental-contextual-specialisation" formulation below Level 5 on the National Qualifications Framework, which has been proposed for Adult Basic Education and Training, generated by the National Training Board and adopted by the national Adult Basic Education and Training Stakeholder Forum under the national Department of Education. This is outlined in Chapter 7.

The diagram below illustrates how different combinations can be made from banks of credits for a qualification at a particular National Qualifications Framework level:


QUALIFICATION
ONE
below National Qualifications Framework Level 5
Category
Banks of units
NQF Level
Integrative assessment = competence
Fundamental
Z
Contextual
Y
Specialisation
X
KEY for table
Required or compulsory units
Bank of optional units from which to make a selection
"Free choice" from any bank, even provider specific

Once a National Standards Body or Qualifications Council has formulated its recommendations regarding rules of combination and integrative assessment criteria for qualifications, these will be forwarded to the South African Qualifications Authority for consideration and registration or endorsement.

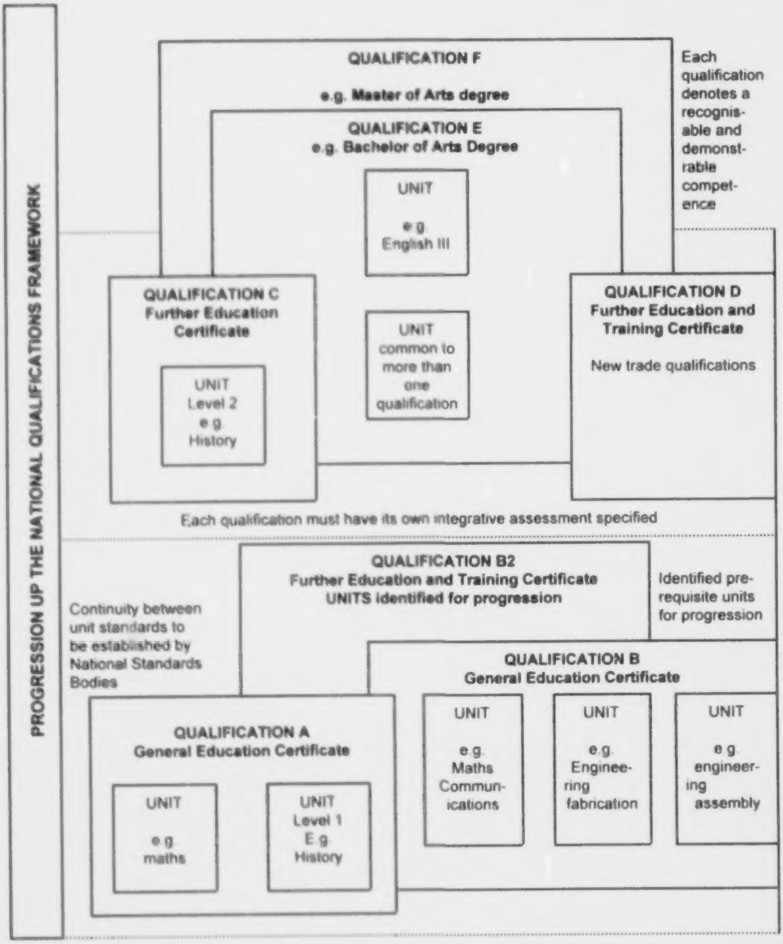
Registration of qualifications and unit standards

The South African Qualifications Authority will measure the forwarded recommendations against agreed criteria and will then either:

a. register the qualifications and its associated unit standards;
b. refer the qualifications and unit standards back to the recommending body for modifications;
c. identify linkages with other qualifications and ensure synergies; or
d. reject the recommendations, giving full reasons for the rejection.

The diagram below attempts to illustrate the relationships between qualifications at levels and different unit standards, progression and synergy with the National Qualifications Framework:

QUALIFICATIONS ON THE NATIONAL QUALIFICATIONS FRAMEWORK


PROGRESSION UP THE NATIONAL QUALIFICATIONS FRAMEWORK
QUALIFICATION F
e.g. Master of Arts degree
Each qualification denotes a recognisable and demonstrable competence
QUALIFICATION E
e.g. Bachelor of Arts Degree
UNIT
e.g.
English III
QUALIFICATION C
Further Education Certificate
UNIT
Level 2
e.g.
History
UNIT
common to more than one qualification
QUALIFICATION D
Further Education and Training Certificate
New trade qualifications
Each qualification must have its own integrative assessment specified
QUALIFICATION B2
Further Education and Training Certificate
UNITS identified for progression
Identified pre-requisite units for progression
Continuity between unit standards to be established by National Standards Bodies
QUALIFICATION B
General Education Certificate
UNIT
e.g.
Maths
Communications
UNIT
e.g.
Engineering fabrication
UNIT
e.g.
engineering assembly
QUALIFICATION A
General Education Certificate
UNIT
e.g.
maths
UNIT
Level 1
E.g.
History

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STAGE 5 : CONTEXTUALISE FOR SPECIFIC PURPOSES

Once stages one to four are complete, individual providers, curriculum developers and companies will be free to prepare learners for the assessments in ways that are appropriate to their contexts. Initiative and creativity in this process will be strongly encouraged. For most qualifications, curriculum prescriptions will not be made: capabilities and competencies will simply be assessed in the ways that have been specified.

Learners will also be free to submit themselves for assessment against the standards set - and when they demonstrate capability and competence - they will be given full credit for their learning, irrespective of where it has been acquired. The complexities of this stage are such that they warrant a separate book!

CHAPTER 9

PRACTICAL EXAMPLES OF SETTING STANDARDS

In this chapter we give eight examples of pilot projects from some sectors that have been involved in national qualifications ***processes.*** *Our examples illustrate many of the points and arguments contained within this book. We also offer a brief trend analysis emerging from the projects.*

A number of sectors have been working towards setting standards in education and training; we present eight examples of such pilots below. The projects are extremely useful as practical examples of work-in-progress. While the examples demonstrate a wide variety of approaches - which suggests that there will be a need to balance flexibility with coherence in the National Qualifications Framework - there are also common trends. The commonalities are discussed at the end of this chapter. It is important to note that none of the projects were constructed to inform the debate (they are all independent, legitimate initiatives), we have used their experiences to inform our thinking.

We ask you, the reader, to study the examples from the perceptive of what they can contribute to a growing understanding of the National Qualifications Framework. However, as work-in-progress, the examples should also be evaluated in terms of what these processes can contribute to the twin aims of social reconstruction and economic growth through improvements to the teaching/learning discourse. Some of the examples may become part of official National Qualifications Framework pilot projects, and as such will be expected to contribute interim national standards as well as their perspectives on whether or not the National Qualifications Framework proposals, as a whole, are implementable.

Your critical evaluation and comments on the examples is invited by the contact persons listed after each example.

PILOT PROJECT 1:

INDEPENDENT EXAMINATIONS BOARD

The Development of Adult Learning Standards

The Independent Examinations Board runs an assessment and certification system through setting external examinations and through moderating internal assessment. It certificates learners in schools up to Year 12, and to the equivalent level in the adult education field.

The Pilot Project below is within the sector of Adult Basic Education and Training (ABET) that is in the *fundamental* category. This originally meant *general education* for ABET Levels 1-3 for the Independent Examinations Board. And we took as our "levels" starting point that these ABET levels would be comparable to years 3-7 in the formal schooling system. So far, the project has focussed on Language Communication (in all eleven South African languages at Levels 1 & 2, and at present only in English at Level 3) and Numeracy/Mathematics. Candidates are entered for these examinations through routes such as industry-based training programmes, commercial adult basic education agencies or community-based programmes.

What is the project's main goal?

The purpose of the pilots at the three levels (ABET Levels 1-3) is to mark out a clear learning pathway for those adults trying to achieve a basic education. This is done by assessing their progress at various stages of learning and awarding certificates to those who achieve the standards at different levels. The Independent Examinations Board's goal is also to take part in shaping worthwhile values and provision in adult basic education and training through assessment and examinations that have a constructive impact on teaching and learning in the sector.

What is the project's relationship with the development of the National Qualifications Framework?

The standards for language communications and mathematics/numeracy were developed based on proposals for the National Qualifications Framework. For instance, the outcomes-based approach was adopted in order to fit with the proposal that standards be registered on the National Qualifications Framework in the form of outcomes and related assessment criteria. The Independent Examinations Board recognises the need to develop a system of assessment that is compatible with the systems and structures that will be put in place, and the pilots were therefore designed to be flexible enough to be adapted to whatever criteria and procedures are finalised.

What are the most important things you have learned through your pilot project?

- The "standards-setting process" requires the involvement of all interested stakeholders in order to ensure its legitimacy. It is clear that standards developed without consultation will be rejected.
- Standards in the form of statements of outcomes remain abstract and meaningless unless illustrated by concrete examples of assessment tasks and learner performance.
- While an outcomes- and competency-based approach has traditionally been linked to training rather than education, the pilots have shown that the approach is very flexible; outcomes need not be linked to narrowly-defined skills, but can accommodate broad cognitive competencies as well.

What have you learnt through your pilot about how the National Qualifications Framework may or may not work?

- Properly consultative standard-setting processes, involving both practitioner and specialist input across different sectors, is an expensive and time-consuming business.
- Through its flexible approach to the acquisition of learning credits, the National Qualifications Framework has the potential to free our education and training system from many unnecessary barriers. However, the system will not be used properly by learners and other stakeholders unless there are clear and accessible guidelines on how it works. Information and counselling services on various career paths and qualifications options must be easily available.

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PILOT PROJECT 2:

EDUCATION, TRAINING AND DEVELOPMENT PRACTITIONER PROJECT

Moving towards Standards for Practitioners

What is the project's main goal?

The development of education, training and development practitioners must rank as one of South Africa's most crucial priorities. It is imperative that the present lack of coherence as regards the competence of providers in the field is co-ordinated if the country is to make up the massive backlog in the skills of its population. A credible and marketable model for the development of education, training and development practitioners is needed. The outlines of such a model have been produced (by Working Committee 3 of the National Training Board's National Training Strategy Initiative).

The main goal of this project is to flesh out the model by giving substance to the notion of progression pathways, sets of unit standards and qualifications for developing and recognising quality education, training and development practices within the National Qualifications Framework.

What is the project's relationship with the development of the National Qualifications Framework?

The National Training Strategy Initiative had, as one of its main recommendations, the establishment and growth of a national qualifications framework. It proposed that standards be registered on the National Qualifications Framework in terms of outcomes and related assessment criteria. In developing the Education, Training, Development Practitioner model there is no doubt that outcomes will be the central focus as they form the link to the National Qualifications Framework. In short, the project will develop a South African competence and outcomes-based model for "trainers", and will identify requirements for registration, certification, accreditation and recognition of existing qualifications, experience and competence in a national integrated qualification structure. This will bring into being a hierarchy of progression pathways for practitioners and curricula guidelines for the preparation of programmes for practitioners.

What are the most important things you have learnt through your pilot project?

The notion of competence or outcome-based learning, while compatible with the interests of employers and labour, is by no means generally accepted and arguments for and against "competencies" or "outcomes" abound. Although there is agreement (here and internationally) that the task-specific and reductionist behaviour modelling processes of the previous decades are inadequate to the development of the "flexible workers" of the future there is as yet no credible and widely accepted alternative. Therefore this project understood very early that the *process* of building a competence-based model would be as important as the outcomes. This process may be useful as a model for developing future National Qualifications Framework criteria and guidelines.

What are the most important things you have learnt through your pilot about how the National Qualifications Framework may or may not work?

- A model that is built from the "outside" - without the participation and involvement of those who will be directly affected - will lead to problems at the implementation stage. It is, therefore, essential that participation from all stakeholders is sought.
- The process will be subject to certain "demands" from stakeholder groupings which need to be carefully channelled.
- Sets of unit standards need to be developed according to the needs of the model and only then checked against the South African Qualifications Authority criteria.
- Ideas that may seem simple to the originators need to be carefully explained to make them accessible to all.
- New terminology can delay understanding if not motivated, explained and generally accepted.

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PILOT PROJECT 3:

ENGINEERING COUNCIL OF SOUTH AFRICA

Setting Standards in Engineering Higher Education

The Engineering Council of South Africa is a statutory body empowered by its Act to register engineering professionals in four categories: professional engineers, engineering technologists, technicians and certified engineers. The requirements for professional registration include an academic component.

What is the project's main goal?

The engineering profession has identified a number of requirements that must be fulfilled, irrespective of whether higher education operates as part of the National Qualifications Framework, or not. Our project addresses all of these requirements, which are listed below:

- Standards indicating the minimum requirements for accreditation of bachelor degrees and diplomas must be written. The programme content of the guidelines for accreditation needs to be amplified.
- It is important that the system is coherent, that the nature of various qualifications are understood and that the distinctive roles of the institutions are fulfilled.
- An access and articulation system must be developed out of the ad hoc initiatives that exist.
- The profession must ensure that our engineering qualifications are internationally comparable, are relevant to the needs of employment, and provide human resources who can adapt to changing technology and work organisation.
- The need has been identified to change from a predominant content focus to outcomes which emphasise generic abilities.
- Creating pathways from industry education and training schemes into higher education has been identified as a priority. Recognition of prior learning must be developed.

What is the project's relationship to the National Qualifications Framework?

The Engineering Council is committed to supporting the development of the National Qualifications Framework and believes that the framework can materially assist the development of engineering higher education. It is likely that we will proactively seek recognition as a National Standards Body, possibly in partnership with major industry, education and training groupings.

What are the most important things you have learned through your pilot project?

The project is still in its early stages: the hard work of writing standards lies ahead. Much conceptual groundwork has, however, been completed, such as a framework for describing engineering qualifications and their constituent units in terms of knowledge, specific skills, abilities and values. The framework allows the distinctive nature of university and technikon qualifications to be described in a way that accords esteem to each for its purpose.

The value of interaction with a wide range of National Qualifications Framework stakeholders (and opponents) must not be underestimated. Engineering education and other education and training sectors can learn a lot from each other. The long-established mechanism for accrediting university engineering degrees is a case in point.

The vital importance of qualification standards in addition to unit standards came out strongly in our work. We found high level descriptions of the integrated knowledge and abilities of the qualification holder essential in defining a range of qualifications for the engineering world. The value of a conceptual framework for defining qualifications - a novelty to many engineering academics - proved useful.

We also learned about the concerns that staff, students and the administrators of institutions have about the system. We found it essential to work through understandable worries, for example, on how to handle potential tension between a system of standards and the need for innovation in engineering curricula.

What have you learnt through your pilot about how the National Qualifications Framework may or may not work?

Perhaps the best way of answering this question is to list some of the critical success factors that were identified for a productive relationship between engineering higher education and the National Qualifications Framework:

- Both qualifications and unit standards must be registered on the National Qualifications Framework.

- Standards must represent the minimum acceptable level of achievement, as determined by a competent standards body and not the lowest common denominator of the actual providers.

- Assessment specifications must allow a graded measurement of capability and not simply be "pass/fail" in nature.

- The unit specification must allow flexible delivery methods both in teaching and learning approaches and in the packaging of the programme into courses/subjects.

- The resulting system must encourage innovation and healthy diversity.

- The standards body for engineering must operate in a dynamic way with inputs from both the employment and academic sector, receive feedback from the accreditation process and enforce periodic reviews of standards.

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PILOT PROJECT 4:

ESKOM

The Integration of all Learning Interventions and Standards, and the linking of these to a Common Competency Menu

What is the project's main goal?

This project is one of ten sub-projects which aim to achieve the effective co-ordination of all Eskom's education, training and development efforts.

Its specific objective is to link (integrate) all present and future learning interventions and activities in terms of needs analyses, design, development, evaluation and standards to a common competency menu consisting of generic, specific and professional competencies.

To this end, the first step in this process was to cluster jobs into job families to enable generic curricula to be developed in accordance with the organisation's prioritised needs. We used career paths as the point of departure for the curriculum development.

Initially, an output model is generated for each job. Following this, curricula are developed that can be evaluated against the National Qualifications Framework standards to enable programmes to be accredited.

Eskom uses an adapted Mclagan methodology and group facilitation (drawing on inputs from all stakeholders) for each discipline (electrical, chemistry, etc) to develop curricula. These curricula are compared across disciplines for consistency with respect to volume of work, quality criteria and expectations placed on employees in each level of work.

What is the project's relationship with the development of the National Qualifications Framework ?

The National Qualifications Framework standards are essentially the benchmarks against which all providers can have their curriculum outcomes evaluated, accredited and monitored.

In its cross-discipline approach to standards, this project is essentially an in-house umbrella standards body which mirrors the work of the proposed standards-generating bodies, the National Standards Bodies.

While the National Qualifications Framework will register standards which the end-product must meet, the Eskom project models a process through which consistent, comparable end-products may be produced.

What are the most important things you have learnt through your pilot project ?

- It is extremely complex to try to ensure consistency across disciplines with respect to quality, volume and level of curricula.
- Stakeholders are intent upon the issue of fairness when comparing curricula.
- Although a certain methodology is used by Eskom, the work groups tend to adapt the methodology (often to a large degree to suit their own needs).
- There is a continual danger of stakeholders trying to influence the development process to satisfy their own ends (eg, overstate the level of the job) rather than to focus on the needs of the organisation).
- We have reached a clearer understanding of the difference between standards and curricula.

What have you learnt through your pilot about how the National Qualifications Framework may or may not work ?

In addition to the above lessons, the following lessons should be heeded:

- Stakeholders who participate in National Standards Bodies will probably be using their own curricula as points of departure. They could focus on formulating standards to satisfy their own course(s), rather than on the standards themselves. Expert facilitation will be needed to maintain the focus on standards.
- The framework will only be able to prove itself and be optimised/fine-tuned once stakeholders get together to develop common standards.
- The debate on cognitive, effective and affective/psychometric abilities, or skills, knowledge and attitudes will not be resolved by the National Qualifications Framework. Stakeholders will continue to use their own preferred terminology. Perhaps the debate is irrelevant to the end result.

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PILOT PROJECT 5:

HOSPITALITY INDUSTRY TRAINING BOARD

National Qualifications (NQs) for the Hospitality Industry

What is the project's main goal?

The aim of the Hospitality Industry Training Board's National Qualifications (NQs) is to give recognition to employees in the industry for what they already know and can do. Candidates are assessed against national competence standards, and, on achieving these standards, will receive a National Qualification. This process aims to integrate practical and theory into holistic competence.

What is the project's relationship with the development of the National Qualifications Framework?

We will be testing the assessment mechanism for Recognition of Prior Learning for the pilot project which will assist with the development of the National Qualifications Framework.

What are the most important things you have learnt through your pilot project?

- It is time-consuming to set occupational standards and therefore a process of consultation must be followed. This ensures that all stakeholders participate throughout the standards setting process and have ownership of and buy-in to the system.

- Generic competencies can present a potential problem in terms of assessment, as assessors have to be competent in the functional area that they themselves are assessing. For instance, it is difficult for a chef to assess fire-fighting procedures.

- Implementation of a system like this is a lot slower than anticipated: an information campaign as well as much marketing is required if there is to be "take-up" of the system. The cascading of the system throughout large organisations is a slow process, and our own capacity has to expand to meet the demands placed on us. Greenpatching of selected sites is effective in creating good examples of where the system is working, but these sites require a lot of support.

- Quality control mechanisms must be very effective to ensure the continued integrity of the system.

- A lot of work has to done to support the providers of education and training when they start changing their training programmes to meet the demands of the framework in terms of flexible, modular, competence-based training.

What have you learnt through your pilot about how the National Qualifications Framework may or may not work?

Our queries and question marks include how our own qualifications framework will integrate with the national one - what re-alignment will we have to do? We are also unsure of formatting, and may have to reformat our standards to meet the requirements of the South African Qualifications Authority.

Equivalence of qualifications is also a question: for example, will level 4 be regarded in the same light as a traditional matric qualification?

Another question relates to the clustering of occupational competencies when designing level 5 and higher qualifications: Our vocational competencies will probably fall within levels 2 and 4, but management qualifications are level 5 upwards. A manager in our industry must have certain vocational competencies in order to be an effective manager, so how will the lower level competencies be included in a higher level qualification, which already has an entry requirement of a level 4?

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PILOT PROJECT 6:

METALS AND ENGINEERING INDUSTRIES EDUCATION AND TRAINING BOARD CAREER PATH PROJECT

The Development of Standards for training Workers in Production and Manufacturing Processes.

What is the project's main goal?

Initially, this project aimed to develop career paths for workers and flexibility for employers covered by the Metals and Engineering Industries Education and Training Board. We subsequently recommended that the project be expanded to become a national project covering engineering and manufacturing processes.

The project is trying to develop standards within a framework which promotes the integration of education and training in meaningful learning opportunities for workers, and yet still remains relevant to the needs of the industry. The framework will be comprised of learning pathways that lead to nationally accredited qualifications. The qualifications will be based on combinations of unit standards, expressed in terms of outcomes linked to assessment criteria.

What is the project's relationship with the development of the National Qualifications Framework?

The project has been accepted by the National Training Board as a pilot project for engineering and manufacturing processes. It is hoped that the standards generated will contribute to an understanding of the process and be acceptable to the South African Qualifications Authority for registration.

What are the most important things you have learnt through your pilot project ?

- A skills list which describes the range of standards to be written is essential to identify potential stakeholders in the standards-setting process. The process of developing the list was highly contested but a commitment to one at a more generic level of specificity was maintained in order to ensure portability of credits for workers.

- In developing national standards it is necessary to consult with a wide range of stakeholders in order to ensure "ownership" of the standards across the industry and that the standards produced are relevant, credible and appropriate.

- The identification of fundamental learning (language and mathematics) and core or contextual learning (health and safety, quality, industry policy and work organisation) needs to be explicit from the start.

- In developing level descriptors, a broader notion of complexity is being explored. It is anticipated that level descriptors will be developed when standards are compared across contexts. Several aspects of standards set at each level are being considered, including:
    - the contexts in which the standards might be applied ;
    - the contingencies that the standards implies;
    - the range and familiarity of the activities involved in the standards;
    - the content or information required by the standards;
    - conceptual abilities required by the standards;
    - the nature of problem-solving abilities required by the standards;
    - tool usage and dexterity required by the standards;
    - the field and nature of influence of the performance;
    - the learning implications of the standards.

What have you learnt through your pilot about how the National Qualifications Framework may or may not work ?

The potential of the National Qualifications Framework to meet the aims of quality learning, portability of credits, progression through learning pathways and meaningful and integrated learning will depend on the commitment to these aims of the stakeholders involved in National Qualifications Framework development projects. If the framework is to work, people will be required to relinquish "traditional turf" and to negotiate their interests in order to work towards a consensual understanding of what makes for *useful learning for the learner*.

The framework will only work if there is collaboration in the development process and commitment to the principles that underpin the framework, and to implementing an approach that seeks to work from the learner's perspective.

If unit standards are to provide useful guidelines with which to develop learning opportunities, they must reflect the forms of knowledge that are needed in the workplace.

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PILOT PROJECT 7:

TRANSNET TRAINING BOARD

The Development of Standards for Generic Supervisory and Management Functions

What is the project's main goal?

Initially the aim of this project was to develop generic standards for supervisors and managers within Spoornet. Given emerging processes towards the National Qualifications Framework, however, we soon realised that this project could become the basis of a national effort to develop standards in this field. Subsequently a range of stakeholders were approached. Currently the project is one of the National Qualifications Framework pilots with its main goal being the development and implementation of comprehensive, nationally-agreed standards for generic supervisory and management functions (irrespective of job title). These standards are to be expressed in terms of outcomes with associated competence, which in turn will be linked to explicit assessment criteria.

What is the project's relationship with the development of the National Qualifications Framework?

In its piloting of the standards, the project could offer the National Qualifications Framework the following valuable advantages:

- A strongly developed, coherent (but contestable) notion of "level" of these outcomes and therefore progression.
- Linkages to international qualifications by involving international tertiary providers in the process alongside South African industry and tertiary providers.
- An existing, sound "Interim National Standards Body".

What are the most important things you have learnt through your pilot project?

- In developing national standards it is vital to consult with as wide a range of stakeholders as possible in order to assure general buy-in and an implementable end result.

- In describing levels and the complexity associated with each level cognisance needs to be taken of at least the following aspects:
    - the fundamental outcome of the work;
    - the content of the work;
    - the exercise of discretion in terms of time-span of decisions;
    - uncertainty in terms of routine or turbulence;
    - the process of communication.

What have you learnt through your pilot about how the National Qualifications Framework may or may not work?

The ultimate proof of competence and therefore progression lies not in academic qualifications, but in a combination of theoretical knowledge and contextual understanding combined with verifiable and assessable outcomes on the job (including self-assessment). In defining levels on the National Qualifications Framework the following is important to bear in mind:

- It does not lead to the assumption that decisions are taken exclusively at certain "higher" levels and the execution of decisions at "lower" levels.

- It provides space for creativity and initiative at all levels.

- It takes as a point of departure human growth and development through the different levels.

- It values the contributions made at each level.

- It does not assume levels of work to be associated with difficulty, levels of content material or the intelligence of individuals.

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PILOT PROJECT 8:

PLASTICS INDUSTRY TRAINING BOARD

Defining Outcomes in an Open Learning System

What is the project's main goal?

Our project has tried to create an open learning system by defining outcomes. Progress through the learning system would allow learners to acquire a qualification in the workplace which would be equivalent to one obtained through formal learning institutions. The system was intended to meet a wide range of, sometimes conflicting, requirements, including:

- the diversity, size variation, technical sophistication and geographical dispersion of the plastics industry and its employees
- the patchy and often inappropriate educational experiences of the employees
- the changing nature of the workplace both in terms of increased competition from overseas, changing technology, the introduction of quality management systems and the development of team-based working environments
- the need to recognise prior learning which has been obtained informally
- employees potential lack of access to institutions of formal learning
- the integration of education and training (two faces of the same coin)
- a set of standards which were not prescriptive in terms of delivery
- an assessment system which would measure the integration of a range of abilities and the underpinning knowledge into a job related activity or activities.

What is the project's relationship with the development of the National Qualifications Framework?

The plastics industry is relatively new and has no prior formal qualification system. In embarking on the project, we were driven by the wishes and demands of employees and the unions. As the discussions and concepts evolved, so our standards-setting process was influenced and then became a "test-bed" to see if an abilities-based definition was possible.

What are the most important things you have learnt through your pilot project?

- By taking learning (rather than teaching) as a driving concept, old conflicts and dichotomies disappear (eg knowledge/skill) and new constellations of knowledge/skill relationships emerge.

- Fundamental abilities (generic capacities) can form part of the development process.

- The world of work is far more complex than either training or education analysis had previously shown.

- Workplace learning is far more demanding and forms a bigger part of the learning process than we had previously imagined. It became clear to us why there were so many problems of transfer from classroom to workplace.

- To be a successful learner requires far more that merely memorisation of basic facts and principles. It requires developing a range of perceptual and cognitive skills and experiences to make use and sense of the facts and principles.

- By changing to the pronoun *I* and generating standards which were stated in the first person, we could construct a standard which was an invitation to learn rather than a barrier, a standard where self-assessment became part of the learning process. It could accommodate each individual's particular situation and needs as well as changes in the future.

- Our knowledge and skills framework - *materials* (inputs), *processes* (the actual work), *quality* (assessing the process and outputs), *care and maintenance, interaction and management*) - with which we entered the process held good and became another power pack to developing the concept. It helped us break through the barrier of defining a person in terms of tasks s/he performed and rather focus on the full range of activities in which a person may become involved. (Even an operator or welder at some point has to attend meetings, fill in leave forms and discuss problems with others.)

What have you learnt through your pilot about how the National Qualifications Framework may or may not work?

A qualification system which is determined and imposed without reference to learners' needs and aspirations or the ultimate application of that learning is a system out of step with the times. Higher level qualifications tend to be the preserve of universities or their imitators. This kind of qualification system must be one of the last remnants of the feudal system left in our society. While we are in the process of democratising our country we should look at democratising our qualifications systems too.

If rigorous thought is not given to the outcomes of the learning process, the subsequent qualifications will be meaningless.

Whatever the system looks like evenfually, it should not prescribe the delivery system. It should allow for a multiplicity of routes, delivery methods and should legitimise workplace and contextual learning. You can have all the paper qualifications you like, but unless you can make people laugh you are not qualified to be a clown.

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TREND ANALYSIS OF THE PILOT PROJECTS

While the eight projects described range widely in scope, they have much in common. Some trends that are emerging from the pilots are:

- Attempts to remove barriers to education and training opportunities are being made in order to give wider access to learning for all.
- Alternative routes to qualifications are being provided, not just formal pathways.
- Processes for setting standards that remain relevant in a world of changing social, economic and cultural demands are being sought.
- Assessment is increasingly being integrated into the standards, and there is a special emphasis on recognition of prior learning.
- Learning pathways and recognised certification are emerging at all National Qualifications Framework levels as one incentive towards lifelong learning.

The two strongest trends emerging from the pilots are:

- The need for all stakeholders to participate in the standard-setting process to ensure its legitimacy and the easier acceptance of the standards generated.
- The focus on competence rather than "passing examinations" as the basis for qualifications.

In addition to these common trends, each project highlights a specific aspect of the debate around the National Qualifications Framework. Some of the most notable aspects are:

- The notion of levels within the National Qualifications Framework and what differentiates one level from another.
- Classification of learning into various fields to promote coherence and understanding.
- The need for international acceptance of local standards and qualifications.
- The establishment of suitable processes for setting national standards.

- The creation of meaningful learning pathways and hierarchies of qualifications.

- An understanding of relationships and differences between standards and curriculum.

Trends will continue to emerge and change over the lives of these projects. It is important to monitor these trends so as to build a better understanding of the National Qualifications Framework, which can, in turn, lead to better policy culminating in successful and widespread implementation.

CHAPTER 10

FUNCTIONS AND STRUCTURES ASSOCIATED WITH THE NATIONAL QUALIFICATIONS FRAMEWORK

The South African Qualifications Authority Act provides for functions that will need to be performed by identified structures in order to put the framework into operation. This chapter looks at the range of functions that need to be performed and who will perform these functions.

Implementation of the National Qualifications Framework requires that essentially three functions are performed:

- *development of overall policy and procedures;*
- *setting of standards for units and qualifications;*
- *ensuring that the assessed outcomes meet the required standards.*

The National Qualifications Framework is *not* directly involved in questions about *how* these standards are delivered in practice - only that the standards set are indeed demonstrated and fairly assessed.

The following two broad guidelines have informed discussion on the design of structures to carry out these functions:

- *Incompatible functions should not be vested in the same body. For example, auditing assessment and assessment cannot be done by the same body without there being a conflict of interest.*
- *For every credit or qualification awarded, there must be a definite path back to the standards and this path should be as simple as possible.*

Applying these guidelines to the overall design of the system generated four[28] clearly distinct authorities plus a moderator sector, in addition to the providers themselves:

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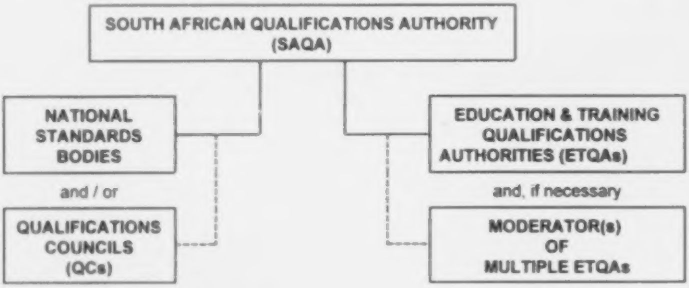
[28] The South African Qualifications Authority Act (1995) refers to three structural elements: the South African Qualifications Authority itself and bodies to determine and bodies to maintain standards. The authors, after taking into account the different functions and structural elements required at different levels for the implementation of the National Qualifications Framework, are proposing and additional two structural elements, namely, moderator bodies and qualifications councils.

Broad function	Responsible authority (proposed)
• overall policy setting • registration / accreditation of standard setting and quality assurance bodies • registration or endorsement of unit standards and qualifications	South African Qualifications Authority (SAQA)

• writing standards including
  • standards review
  • setting moderation requirements
• proposing and/or specifying the rules of combination for qualifications
	National Standards Bodies
	(NSBs)
	and / or
	Qualifications Councils
	(QCs)

• quality assurance • assessments and examinations (where appropriate) • registration of assessors	Education and Training Qualifications Authorities (ETQAs) and / or appointed Moderators (where more than one ETQA assures quality for a single unit or qualification)

These authorities can be depicted diagrammatically as follows:


SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)
NATIONAL STANDARDS BODIES
and / or
QUALIFICATIONS COUNCILS (QCs)
EDUCATION & TRAINING QUALIFICATIONS AUTHORITIES (ETQAs)
and, if necessary
MODERATOR(s) OF MULTIPLE ETQAs

The National Qualifications Framework, in has thus potentially four structural elements:

- the *coordinating structure*, the South African Qualifications Authority;
- bodies registered by the South African Qualifications Authority to *set standards* in particular fields of learning. These are generally referred to as National Standards Bodies (NSBs);

- stakeholder bodies registered to determine the *rules of combination* for qualifications, which we have referred to as Qualifications Councils (QCs); and

- bodies accredited by the South African Qualifications Authority to *ensure that the standards set are in fact delivered*. These bodies are generally referred to as Education and Training Qualifications Authorities (ETQAs). Where there is more than one Education and Training Qualifications Authority overseeing a single unit or a qualification, we have proposed that the National Standards Body for that field of learning nominates a moderating body to ensure that there is no "standards drift" between the Education and Training Qualifications Authorities for that unit standard or qualification.

THE SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

The South African Qualifications Authority will be established in terms of the South African Qualifications Authority Act. It will comprise a Board of 22 to 30 people, drawn from nationally organised stakeholder groupings and constituencies, recognised by the Minister for representative purposes.[29] The South African Qualifications Authority Board will be run by a Chairperson, Executive Director and supporting staff.

In terms of the Act, the South African Qualifications Authority has essentially two functions: developing the rules of the National Qualifications Framework, and, overseeing the implementation of the new system.

Developing the overall rules of the new system

The South African Qualifications Authority will oversee the development of the National Qualifications Framework in consultation with bodies nominated by the Ministers of Education and Labour. The Minister of Education has the executive responsibility for all aspects of the implementation of the National Qualifications Framework.

In developing the National Qualifications Framework, the South African Qualifications Authority will formulate and publish policies and criteria for two important processes:

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[29] The different constituencies and representative bodies together with the number of representatives are specified in the South African Qualifications Act, which is reproduced in the Appendices of this book.

- the registration of bodies responsible for establishing education and training standards and/or qualifications (National Standards Bodies and/or Qualifications Councils), and
- the accreditation of bodies responsible for monitoring and auditing achievements in terms of such standards and/or qualifications (Education and Training Qualifications Authorities and/or Moderation bodies).

The South African Qualifications Authority will also carry out a range of other functions. These include:

1. defining the *levels* on the National Qualifications Framework. This may include defining the level of complexity of identified learning abilities at each level;

2. defining the *format* in which a *unit standard* has to be presented in order to be registered on the National Qualifications Framework;

3. defining the requirements for the registration of a *qualification* at various levels on the National Qualifications Framework. This may include restricting the use of certain terms[30] to the specific achievement of an agreed number and type of credit points at identified levels on the framework) and the integrative assessment required for the award of such qualifications;

4. developing agreed *policies and procedures* for, *inter alia* :
    - defining requirements for qualifications to be registered on the National Qualifications Framework;
    - registering National Standards Bodies which will define the scope of knowledge that is to be covered;
    - registering bodies for determining the rules of combination for qualifications, the proposed Qualifications Councils;
    - registering standards and qualifications;
    - accrediting Education and Training Qualifications Authorities;
    - developing assessment and moderation guidelines and registering assessment or moderating bodies in line with criteria put forward by the relevant National Standards Body[31];

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[30] such as degree, national diploma, trade/ production/ service/development certificates, and other certificates including General Education Certificate, Further Education Certificate

[31] The whole question of moderation and assessment is addressed under National Standards Bodies

- record-keeping arrangements, including the basis for record entry;
- review of assessment system;
- appeals mechanisms and processes in the event of disputes arising;
- policy on apportionment of costs/fees;
- formal procedures and documentation;
- acceptable evidence;
- recognition of prior learning.

5. developing procedures to ensure that all of the above continue to *serve the needs of the society*. There are two issues that need to be addressed in this regard:

   - The first is internal to the education and training system: through a continual review process the South African Qualifications Authority must ensure that the standards of the education and training system reflect the needs of learners and society for human resource development. This will involve an overall review of learner achievements to establish whether historical imbalances are being overcome.

   - The second is external to the system itself. It concerns whether the education and training system is in line with the country's human resource development needs. The South African Qualifications Authority may be required to analyse all records of achievements and report to the Minister of Labour so that human resource requirements can be compared with achievements.

   In order to achieve the first of these two goals, National Standards Bodies may need to continue functioning after the initial standards-setting phase, to function as *standards review* bodies. For this to work, the related Education and Training Qualifications Authorities and moderator bodies would regularly need to submit reports on learner achievements and system audits to the National Standards Bodies, perhaps via the South African Qualifications Authority. This would enable the National Standards Bodies to develop and amend standards dynamically.

Implementation of the National Qualifications Framework

Once the rules have been formally established, the South African Qualifications Authority will be responsible for ensuring that they are implemented through the National Standards Bodies, the Qualifications Councils and the Education and Training Qualifications Authorities.

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NATIONAL STANDARDS BODIES

Key functions

The South African Qualifications Authority will define the key responsibilities of a National Standards Body. Current discussion suggests that they may include the following:

1. Confirm the *classification of knowledge* in the field of learning for which the National Standards Body is responsible. Guidelines for the classification will be provided by the South African Qualifications Authority.

2. *Develop unit standards* within the format specified by South African Qualifications Authority. Such unit standards will contain assessment criteria which will be central for ensuring the quality of learning outcomes in the system.

3. *Recommend qualifications for registration.* The National Standards Body may recommend qualifications to be registered on the completion of specified clusters of standards (again conforming to broad guidelines set by the South African Qualifications Authority). In some cases, qualifications may be specific to a single National Standards Body; in others, as in the case of general qualifications, collaboration may be required across National Standards Bodies. In such instances, qualification recommendations would be effected by a Qualifications Council.

The size of a National Standards Body

The South African Qualifications Authority will determine the demarcations between different National Standards Bodies. There are essentially two broad options which it will have to consider:

Option 1 National Standards Bodies are bodies established with responsibility for all levels on the National Qualifications Framework within a clearly defined *field of learning*. According to the classification system in the Appendices, this would mean that the National Standards Bodies would be established at the first and highest level of generality and would function through a large number of subordinate bodies which do detailed work under their umbrella. This option is explored in depth below.

Option 2 At the second, third or lower level of generality, hundreds of National Standards Bodies are established. They would be responsible for setting standards in their particular sub-field of learning and would thus be responsible for small pieces of the progression. This would mean that the South African Qualifications Authority would have to ensure progression from one level to the next, as well as portability across all these areas.

International experience is convincing in weighing the two options: it would be best to set up National Standards Bodies at the highest order classification level, and establish subordinate structures to cater for the more detailed work required. This seems to be the only way of ensuring that the qualifications framework does not end up consisting of multiple standards for the same broad area of learning. If the standards for the same broad area of learning cannot be matched to one another, a further set of structures and processes will be required to establish equivalency between standards in order to give learners portability and ensure national recognition.

One of the key issues in achieving a valued qualification system is that of ownership of the standards. If there are a multitude of bodies setting standards in discrete ways there will be no joint ownership of standards and the integrated framework will not be realised.

The classification system appended (and referred to in Chapters 6 and 8) suggests twelve "high order" National Standards Bodies.[32]

National Standards Body for Agriculture and Nature Conservation
National Standards Body for Arts and Artistic Crafts
National Standards Body for Business, Commerce and Management Sciences
National Standards Body for Communication Science and Languages
National Standards Body for Education, Training and Development
National Standards Body for Engineering and Manufacturing Processes
National Standards Body for Human and Social Science
National Standards Body for Law, Military Science and Security
National Standards Body for Mathematics
National Standards Body for Medical Sciences, Health and Social Services
National Standards Body for Natural and Life Sciences and Technologies
National Standards Body for Utility Services

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[32] About 38 second order standards bodies have been listed in respect of these twelve 'high order' National Standards Bodies in Appendix B.

The problem associated with establishing National Standards Bodies in this manner, is that a way has to be found to ensure that the National Standards Body standards are portable across the "high order" classification. In other words, a mechanism has to be developed to ensure that at particular levels the outcomes for general or fundamental (formative) components can either become equivalent with one another or can be "collapsed" to ensure that, regardless of classification, all learners achieve the same outcome. For example, it would be necessary to ensure at particular levels that Mathematics standards for Education, Training and Development are equivalent to Mathematics standards for Arts and Artistic Crafts or Engineering and Engineering Technology.

It is the contention of the authors of this book that, for example, the National Standards Body for Mathematics would be chiefly responsible for establishing levels and broad outcomes within a Mathematics framework. Where it is of relevance, other National Standards Bodies would either draw off these standards or establish the mathematics requirements for their particular levels, [e.g. Engineering Drawing (Further Education Certificate level)], which they would then forward for consideration to the Mathematics National Standards Body. The Mathematics National Standards Body would then either include these requirements as part of the outcome for Mathematics at the particular level, or would negotiate an appropriate outcome with the National Standards Body for Engineering and Engineering Technology, before submitting the unit standard for registration by the South African Qualifications Authority.

One further problem concerns equivalence across adult basic education and training and school standards. This will need to be resolved. The authors of this book are hopeful that the proposed Qualifications Councils are one mechanism for addressing this problem.

The composition of a National Standards Body

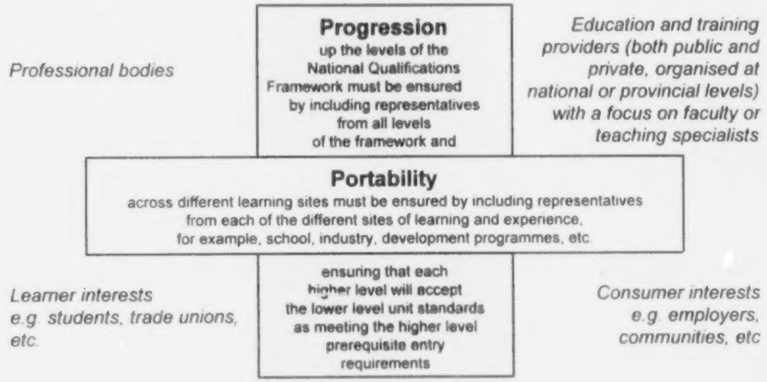
The ethos guiding the composition of National Standards Bodies is the following: everyone with a legitimate interest in the standards being generated should have an opportunity to participate. For example, in the Minister of Education's opening remarks to the Education White Paper, the National Qualifications Framework is "envisaged as being *developed and implemented on an inter-departmental basis, with full consultative processes of decision-making, including all concerned government departments, education and training providers, and major national stakeholders in education and training*".

The practical implications of such a requirement make it likely that nationally organised interest groups will be favoured. Those groups that do not actually sit on the coordinating structure of a National Standards Body will have an automatic right to view and comment on standards generated - both while they are being generated and during the phase when draft standards are made public for comment. Naturally, the final composition would depend on the issues raised under options 1 and 2 above being resolved.

"Players" who would sit on a National Standards Body for a particular field of learning could include the following

- *education and training providers* (both public and private) who are organised nationally or provincially at the various levels;
- *learner* interests, which include organised learners and students in the relevant areas. Trade unions would be responsible for representing worker and worker-learner interests;
- *consumer* interests, especially those whom the skills or learning acquired are meant to serve. This includes employers, communities and the state (e.g. in respect of the unemployed or youth labour market programmes);
- where relevant, the organised interests of *professional bodies*. The role of these groups will be to ensure that the interests of the public in regard to health and safety, professional conduct and the like, are protected;
- various *state departments* which have a responsibility for skills development and training, e.g. Health, Public Administration, etc.

The proposed composition for National Standards Bodies is illustrated in the diagram below, where different "players" have been grouped into four major categories to ensure full representation and participation by all concerned with a particular learning pathway:



Professional bodies

Progression up the levels of the National Qualifications Framework must be ensured by including representatives from all levels of the framework and ensuring that each higher level will accept the lower level unit standards as meeting the higher level prerequisite entry requirements

Education and training providers (both public and private, organised at national or provincial levels) with a focus on faculty or teaching specialists

Portability across different learning sites must be ensured by including representatives from each of the different sites of learning and experience, for example, school, industry, development programmes, etc

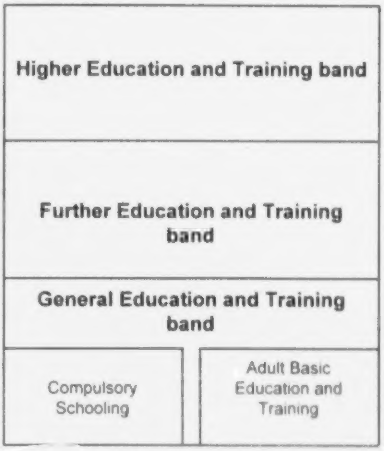
Learner interests e.g. students, trade unions, etc.

Consumer interests e.g. employers, communities, etc

QUALIFICATIONS COUNCILS (QCs)

In Chapter 7, the authors of this book proposed the establishment of qualifications recommending bodies, Qualifications Councils, to determine the rules of combination for qualifications. This is especially important for the general and further education and training bands of learning in order to ensure equivalence and articulation across different sites of learning.

In the diagram below, four broad groupings to recommend qualifications standards are proposed: one each for the higher and further education and training bands and two for the general education and training band: one for compulsory schooling and one for Adult Basic Education and Training.


Higher Education and Training band
Further Education and Training band
General Education and Training band
Compulsory Schooling
Adult Basic Education and Training

The proposed Higher Education and Training Council could take responsibility for this section

A Further Education and Training Council might be needed here or there may be a continuation of the Adult Basic Education and Training (including the National Training Board) Council together with representation for schools.

A structure established under the Department of Education is likely in this section

A reformed Adult Basic Education and Training stakeholder forum, together with the National Training Board, could take responsibility for this section

EDUCATION AND TRAINING QUALIFICATIONS AUTHORITIES (ETQAs)

The credibility of a new qualifications system depends on the agreed standards being maintained. The mechanism proposed for achieving this are the Education and Training Qualifications Authorities. It seems fairly clear that the brief for the Education and Training Qualifications Authorities will be fundamentally different from that of the National Standards Bodies: one has the task of setting standards, while the other has the task of implementing and monitoring the standards. A single body cannot perform both functions as this would constitute a conflict of interest.

In the discussion which follows on quality assurance, a distinction is drawn between learning at levels below the proposed Further Education and Training Certificate (to replace the current Standard 10) and learning above this level. The distinction has been drawn because of a fundamental difference that occurs at this interface. At and below the Further Education and Training Certificate, there tends to be a separation of the functions of provision and assessment, while at most institutions of higher learning, notably universities and technikons, provision and assessment tend to be conducted by the same institution, even the same department. This is illustrated in the following table:

General and Further Education and Training	Higher Education and Training
Providers (e.g. schools, colleges, NGOs, etc)	Providers (e.g. universities and technikons) conduct their own assessments and issue their own certificates.
Bodies, external to providers, which conduct or accredit assessments and issue certificates	
Bodies, external to providers and assessors, which conduct moderation of assessments (e.g. SAFCERT) and issue certificates	Bodies, external to provider/assessor bodies, which perform external moderation (e.g. SERTEK, Engineering Council of South Africa, international universities, etc).

Understanding this distinction has proven to be important in the discussion about who will do what. It is clear that a degree of confusion has arisen in respect of the functions of Education and Training Qualifications Authorities in the national debate - those from institutions of higher education and training conclude that an Education and Training Qualifications Authority will act as a moderator, while those dealing with learning at lower levels on the National Qualifications Framework conclude that an Education and Training Qualifications Authority will conduct or accredit assessments and issue certificates.

Establishing the basis for the misunderstanding has laid the basis for a more flexible understanding of who can perform which functions. Multiple combinations may evolve to meet the range of needs our society generates.

Functions which need to be performed	Possible interpretations by responsible bodies					
Delivery of learning programmes (including self- and site- assessment of progress)	PROVIDERS	• By all at all levels	Education and Training Qualifications Authorities		MODERATORS	
Formal assessment of learners/candidates for unit standard credits / qualifications		• Higher education & training levels		• General & Further Education & Training		
Awarding credit for unit standard achievements and / or qualifications		• Higher education & training levels		• General & Further Education & Training		
Monitoring assessment for unit credits are in accordance with registered standards				• Higher Education & Training level		• General & Further Education & Training
Monitoring assessments for qualifications are in accordance with registered standards		• Higher education & training levels		• Higher Education & Training level		• General & Further Education & Training

What is presented below is a description of Education and Training Qualifications Authorities as envisaged at levels below the Further Education and Training Certificate. It is followed by a discussion of the role of moderators for these Education and Training Qualifications Authorities. The different case of Higher Education and Training is considered thereafter.

Education and Training Qualification Authorities ensuring quality learning *at Further Education and Training Certificate levels and below.*

How does an organisation qualify to become an Education and Training Qualifications Authority?

According to the current proposals, organisations would need to demonstrate the following in order to be accredited as an Education and Training Qualifications Authority:

> be sufficiently representative of key interest groups in a particular sector, e.g. a geographic sector, an industrial sector or a learning sector. For some areas this will include a criterion of labour market "rationality" e.g. linked to an Industrial Council;

- be competent to conduct assessments across a sufficiently broad range of standards registered on the National Qualifications Framework (this will require further definition);
- have assessment procedures in place (either in-house or on contract from outside) which will include "assessor" training and registration;
- be able and willing to conform to moderation procedures specified by the National Standards Bodies with which the Education and Training Qualifications Authority interacts;
- be able and willing to assist with systemic quality audits of learning outcomes initiated by the South African Qualifications Authority;
- have adequate financial and management systems in place;
- demonstrate the capacity to manage all data required for the registration and issuing of credits and certificates to learners and candidates;
- demonstrate the capacity to manage a system for the recognition and recording of prior learning.

At the moment there seems to be agreement on at least two categories of organisations that would qualify to become Education and Training Qualifications Authorities:

1. *Provincial authorities (e.g. provincial departments of education)* for schools and, perhaps, the fundamental category for adult basic education and training;
2. *Sectoral bodies (e.g. industry training boards)*. To ensure progression, these sectoral bodies may work with the relevant professional bodies.

The question remains as to whether any body outside those listed above, can be accredited as an Education and Training Qualifications Authority. For example, would an examinations body qualify? One possible solution may be for an examinations body to register with the South African Qualifications Authority as an assessment/moderation body. It would have to meet the requirements set by a National Standards Body for this purpose. The examinations body could then be contracted to carry out the examination or assessment function on behalf of an Education and Training Qualifications Authority. For example, the Central Organisation for Trade Testing (COTT) could be contracted by any or all of the Education and Training Qualifications Authorities to carry out assessment in certain areas. The same would apply to any examination board.

It will be common practice for Education and Training Qualifications Authorities to co-operate on assessment, since it will be totally impractical for one Authority to meet the requirements of all subject areas. For example, a sectoral body is unlikely to meet the requirements set for a subject like Language Communications while a provincial authority is unlikely to meet the requirements for engineering.

Functions of an Education and Training Qualifications Authority

Should an organisation fulfil the above requirements, it would then be accredited as an Education and Training Qualifications Authority to carry out the following functions:

a. Conduct assessments against national standards registered on the National Qualifications Framework (which in some cases will be examinations) or contract out this function to an examination body or industry training board or institution competent to conduct the assessment.

b. Train and register assessors - or cause this to be done on its behalf.

c. Conform to the moderation procedures specified by the National Standards Body whose standards it is using.

d. Issue certificates endorsed by the South African Qualifications Authority or cause this to be done on its behalf.

e. Ensure that credits earned by candidates under its authority are documented on a national register of learning credits, and that the candidate is given physical proof of having earned such credits.

f. Accredit providers within its area of competence to deliver high quality learning programmes.

However, the accreditation of providers may take different forms for different levels on the National Qualifications Framework. For example, the province, as an Education and Training Qualifications Authority, would be responsible for monitoring the quality of learning without necessarily accrediting state schools. It may, however, wish to accredit private schools under particular conditions.

The role of assessors within Education and Training Qualifications Authorities

It is clear that the role of assessors is key to the functioning of an Education and Training Qualifications Authority and the quality assurance of the system as a whole.

Assessors are people who assess learners and candidates for recognition of prior learning and award credits (and qualifications) to learners who demonstrate the required competence specified in the assessment criteria of a unit standard and qualification criteria.

Assessors need:
- to be competent and experienced in the area in which they are assessing
- to have completed a training programme in assessment which achieves assessments standards encoded at progressive NQF levels
- have good interpersonal skills and contextual knowledge
- have a sound knowledge of the national standards in their area of expertise
- be nominated by relevant groups which enjoy stakeholder confidence.

To have achieved the above they are likely to have to comply to guidelines suggested by the relevant National Standards Body, within broad frameworks set by the South African Qualifications Authority and implemented and enforced by accredited Education and Training Qualifications Authorities.

In order to ensure national consistency and ensure public confidence in a new system it will probably be necessary to verify or moderate the assessments made by assessors. This will have to take place in accordance with requirements for moderation set by the relevant National Standards Body.

How could Education and Training Qualifications Authorities carry out assessments?

How will the system monitor whether standards are in fact being maintained? Below are two examples of how the system could work in different Education and Training Qualifications Authorities' scenarios:

Example from industry:

In the field of engineering and manufacturing skills, there are approximately nineteen registered training boards that may wish to register as Education and Training Qualifications Authorities. Their task would be to assess standards in engineering training. An Engineering and Engineering Technology National Standards Body (for example) will specify assessment criteria within each unit standard. The standards body would have to agree on a moderation mechanism or body to ensure that all nineteen boards, as accredited Education and Training Qualifications Authorities, broadly maintain the same standards in assessing learners and candidates for the awarding of credits.

Example from provincial schooling:

Each province may set its own school leaving examination. However, it may be required to submit a fixed percentage of learners' assessments as evidence to the national education department, or its nominee, for standardisation.

The role of moderation of assessed learning at different National Qualifications Framework levels

To date, little thought has been given to moderation procedures for the system. The main issue revolves around assurance that standards are actually maintained and implemented. While the current proposals suggest a binary demarcation of responsibilities between National Standards Bodies and Education and Training Qualifications Authorities, they presume that the South African Qualifications Authority will be responsible for ensuring that Education and Training Qualifications Authorities accredit outcomes in a similar fashion.

At the General and Further Education and Training Certificate levels, the authors of this book propose that a National Standards Body develops standards for a particular field of learning, for example, the National Standards Body for Communication Sciences and Language. These standards are then forwarded to the South African Qualifications Authority and duly recorded on the National Qualifications Framework.

Let us say that the Mining Industry is then accredited by the South African Qualifications Authority as an Education and Training Qualifications Authority. So is the North West Province. Both of these Education and Training Qualifications Authorities are accredited to issue credits for Language Communications at the General and Further education and training certificate levels.

Neither the South African Qualifications Authority nor the Communication Science and Languages National Standards Body have a direct route for ensuring that the outcomes assessed and certificated by the two Education and Training Qualifications Authorities are consistently being applied and conform with the unit standards as registered on the National Qualifications Framework.

It is therefore proposed that National Standards Bodies will have to recommend, within the parameters set by the South African Qualifications Authority, procedures and requirements for ensuring that the standards set and assessed by multiple Education and Training Qualifications Authorities continue to meet the standards agreed in the National Standards Body.

A range of possible moderation procedures are hereby proposed. The proposals for moderation procedures differ for the different bands of learning on the National Qualifications Framework, as follows:

1. From level 5 and above on the National Qualifications Framework (the higher education and training band), the following could apply:

1(a) At the top end levels of the National Qualifications Framework, *professional bodies* will continue to require some form of registration to ensure that professionals and para-professionals within their sphere of competence (eg. Lawyers, engineers, doctors, meet health, safety and ethical requirements). Professional bodies could thus be appointed to act as moderators across the higher education and training band National Qualifications Framework levels for their sphere of competence and field of learning. This is in keeping with what currently occurs: lawyers, for example, may not practice until they have completed their "bar" examinations; the Medical and Dental Council sets requirements for the registration of doctors, dentists, psychologists, etc.

1(b) For non-professional fields of study, alternative ways of ensuring consistency in the delivery of standards needs to be further discussed and explored.

2. For areas of applied learning at levels below Level 5 on the National Qualifications Framework (that is in the general and further education and training bands), the following could apply:

2(a) More "arm's length" arrangements may apply in the case of general schooling and adult basic education [and training see 2(b) below).]Here provincial authorities may broadly be authorised to ensure that the standards set are maintained *subject to moderation by assessment or moderation bodies registered with the South African Qualifications Authority*.

2(b) Industry or service sector training boards, which meet specified criteria, could be authorised to ensure quality. The National Standards Body may require that these boards are themselves moderated by bodies nominated by the relevant National Standards Bodies and registered by the South African Qualifications Authority to ensure that their standards are consistent with those being used by other boards.

Moderation proposal for the general and further education and training bands:

Schematically, and in broad brush, the proposals contained for the general and further education and training bands for the National Qualifications Framework could be depicted in the following way:

South African Qualifications Authority

1. Registers standards on the National Qualifications Framework;
2. Accredits Education and Training Qualifications Authorities;
3. Conducts quality audits of the entire system.

National Standards Bodies

1. Agree and review standards;
2. Submit standards for registration to the South African Qualifications Authority;
3. Recommend qualifications;
4. Recommend moderation procedures and/or criteria for recommended moderator bodies to follow.

MODERATORS

Education and Training Qualifications Authorities

1. Ensure quality within their sphere of competence;
2. Register assessors;
3. Submit assessments for moderation or verification;
4. Issue certificates endorsed by the South African Qualifications Authority or ensure issued qualifications conform to the set requirements.

Quality assurance *at higher education and training levels (levels 5 and above)*

The higher education and training levels on the National Qualifications Framework will require a different approach to that described above, and this issue will certainly require further debate. Providers such as universities, technikons and colleges in the higher education and training band could be accredited by the South African Qualifications Authority to perform as "provider level" Education and Training Qualifications Authorities. Clearly institutions would be subject to similar accreditation procedures as those that apply to Education and Training Qualifications Authorities in the general and further education and training bands.

These institutions will then continue to:

- i. Set their own assessments;
- ii. Conform to the moderation procedures specified by the relevant National Standards Bodies whose standards they are using (similar to the relationship that currently exists in respect of professional bodies);
- iii. Issue qualifications endorsed by the South African Qualifications Authority;
- iv. Ensure that credits earned by learners and candidates under its authority are registered on a national register of learning credits, and that the learner and/or candidate is given physical proof of having earned such credits.

A proposal for the establishment of a 'Quality Unit' has already met with some approval by the Committee of University Principals. Such a 'Quality Unit" could act on behalf of the South African Qualifications Authority. It could accredit providers in the higher education and training band to conduct audits of the quality of their own work and award their own qualifications, almost along the same lines as if they were provider-level Education and Training Qualifications Authorities.

Such accredited and audited providers would the be subject to:

- meeting the South African Qualifications Authority's broad requirements, e.g. for what constitutes a degree or diploma;
- occasional audits by the 'Quality Unit' to ensure that quality systems are in operation. These could include broad stakeholder involvement in the governance of the institution; and
- the moderation procedures of the relevant National Standards Body being met for the various *fields of learning* covered.

The proposed 'Quality Unit' could effectively act as an integral part of the South African Qualifications Authority and carry out its accreditation functions.

Where an institution fails to meet the requirements set in order for it to act as an Education and Training Qualifications Authority, it could either:

i. link to one or more accredited institutions for a period during which it implements quality promoting changes. At the end of which period it could again be considered for accreditation as an Education and Training Qualifications Authority.

Or,

ii. it may permanently establish a relationship with one or more accredited institutions and effectively be subject to their quality arrangements. This could occur, for example, where a technical college chooses to focus on programmes below National Qualifications Framework Level 5 and simply fall under the umbrella of a Technikon for its Level 5 and above programmes.

(Clearly an institution could move from (ii) to (i) should it so wish, and meet the requirements for accreditation.)

Beyond the moderation of professional faculties by professional bodies, the issue of moderation of "provider level" Education and Training Qualifications Authorities was not fully addressed by the authors of this document and therefore requires further discussion. Ultimately, the question of delivering and moderating standards needs much more detailed work and discussion - but that, along with many other issues, belongs to another book.

APPENDIX A

THE SOUTH AFRICAN QUALIFICATIONS ACT OF 1995

We reproduce the English text version of the South African Qualifications Bill, now promulgated as the South African Qualifications Act, below.

REPUBLIC OF SOUTH AFRICA

SOUTH AFRICAN QUALIFICATIONS AUTHORITY BILL

(As amended by the Select Committee on Education, Sport and Recreation, Arts, Culture, Science and Technology (Senate))

(Minister of Education)

[B 82B--95]

BILL

To provide for the development and implementation of a National Qualifications Framework and for this purpose to establish the South African Qualifications Authority; and to provide for matters connected therewith.

BE IT ENACTED by the Parliament of the Republic of South Africa, as follows:-

Definitions

1. In this Act, unless the context indicates otherwise--
   - (i) "Authority" means the South African Qualifications Authority established by section 3; (viii)
   - (ii) "company" means a company or close corporation registered under any law, which provides education or training for its employees or clients; (v)
   - (iii) "Director-General" means the Director-General of Education; (i)
   - (iv) "Minister" means the Minister of Education and, for the purposes of sections 4(2), 4(3), 4(5), 4(6), 5(1)(c), 11, 13(2),14 and 15(2), the Minister of Education in consultation with the Minister of Labour; (vi)
   - (v) "National Qualifications Framework" means the National Qualifications Framework approved by the Minister for the registration of national standards and qualifications; (vii)
   - (vi) "organised teaching profession" means an organisation or union which is a member of the Education Labour Relations Council established in terms of the Education Labour Relations Act, 1993 (Act No.6 of 1993), and is recognised by the Minister for the purposes of this Act; (ii)
   - (vii) "prescribe" means prescribe by regulation; (x)
   - (viii) "qualification" means the formal recognition of the achievement of the required number and range of credits and such other requirements at specific levels of the National Qualifications Framework as may be determined by the relevant bodies registered for such purpose by the South African Qualifications Authority; (iv)
   - (ix) "registered" means registered in terms of the National Qualifications Framework; (iii)
   - (x) "standard" means registered statements of desired education and training outcomes and their associated assessment criteria. (ix)

Objectives of National Qualifications Framework

2. The objectives of the National Qualifications Framework are to--
   - (a) create an integrated national framework for learning achievements;
   - (b) facilitate access to, and mobility and progression within education, training and career paths;
   - (c) enhance the quality of education and training;
   - (d) accelerate the redress of past unfair discrimination in education, training and employment opportunities; and thereby
   - (e) contribute to the full personal development of each learner and the social and economic development of the nation at large.

Establishment of South African Qualifications Authority

3. There is hereby established a juristic person called the South African Qualifications Authority.

Constitution of Authority

4(1) The Authority shall consist of a chairperson who shall be appointed in terms of subsection (2), such members as shall be appointed in terms of subsections (3) and (4), and an executive officer who shall be appointed in terms of subsection (7).

(2) The Minister shall appoint a person of experience and expertise in matters relating to the functions of the Authority, to be the chairperson of the Authority.

(3) The Minister shall appoint the following persons as members of the Authority. In the manner provided for in subsection(4)--

(a) one member nominated by the Director-General;
(b) one member nominated by the heads of provincial education departments;
(c) one member nominated by the Director-General: Labour,
(d) one member nominated by the National Training Board;
(e) two members nominated by the national organisation representing organised labour;
(f) two members nominated by national organisations representing organised business;
(g) one member nominated by the Committee of University Principals established by section 6 of the Universities Act, 1995 (Act No. 125 of 1993);
(h) one member nominated by the Committee of Technikon Principals established by section 2 of the Technikons Act, 1993 (Act No. 125 of 1993);
(i) one member nominated by the national body representing teachers' college rectors and recognised by the Minister for this purpose;
(j) one member nominated by the national body representing technical college rectors and recognised by the Minister for this purpose;
(k) one member nominated by national organisations representing colleges other than teachers' colleges and technical colleges and recognised by the Minister for this purpose;
(l) one member nominated by national organisations representing the adult basic education and training sector and recognised by the Minister for this purpose;
(m) one member nominated by national organisations representing the early childhood development sector and recognised by the Minister for this purpose;
(n) two members nominated by the organised teaching profession;
(o) two members nominated by national organisations representing lecturers and trainers and recognised by the Minister for this purpose;
(p) one member nominated by national organisations representing the special education needs sector and recognised by the Minster for this purpose;
(q) not more than six members appointed by the Minister at his or her discretion;
(r) not more than two members co-opted by the Authority at its discretion and recommended to the Minister for appointment.

(4) For the purpose of seeking nominations as contemplated in subsection (3), the Minister shall give notice in the *Gazette* of his or her intention to appoint members of the Authority, and shall request any body or organisation in the fields referred to in subsection (3) to submit the names of persons who, on account of their experience and expertise in matters relating to the functions of the Authority may be suitable candidates for appointment as members of the Authority and in submitting the names of candidates due recognition shall be given to the principle of representivity.

(5) For the purpose of the nominations contemplated in paragraph (n) of subsection (3), not more than one nomination shall be made by any one organisation or union.

(6) A member of the Authority excluding the executive officer, shall hold office for such period which shall not exceed three years, as the Minister may determine at the time of his or her appointment, and a member may be re-appointed for one further term of office when his or her initial term of office expires.

(7) The Minister shall, in filling any vacancy, take the provisions of subsection (3) into account.

(8) The members contemplated in subsections (2) and (3), shall, with the approval of the Minister, appoint a competent person to be executive officer on such conditions of service as may be determined by the Authority with the approval of the Minister, granted with the concurrence of the Minister of Finance.

Functions of Authority

5(1) Subject to the provisions of subsection (2), the Authority shall--
- (a) (i) oversee the development of the National Qualifications Framework; and
  - (ii) formulate and publish policies and criteria for--
    - (aa) the registration of bodies responsible for establishing education and training standards or qualifications; and
    - (bb) the accreditation of bodies responsible for monitoring and auditing achievements in terms of such standards or qualifications;
- (b) oversee the implementation of the National Qualifications Framework, including--
  - (i) the registration or accreditation of bodies referred to in paragraph (a) and the assignment of functions to them;
  - (ii) the registration of national standards and qualifications;
  - (iii) steps to ensure compliance with provisions for accreditations; and
  - (iv) steps to ensure that standards and registered qualifications are internationally comparable;
- (c) advise the Minister on matters affecting the registration of standards and qualifications; and
- (d) be responsible for the control of the finances of the Authority.

(2) The Authority shall pursue the objectives of the National Qualifications Framework as provided in section 2 and execute the functions of the Authority as provided in sub-section (1)--
- (a) after consultation and in co-operation with the department of state, statutory bodies, companies, bodies and institutions responsible for education, training and the certification of standards which will be affected by the National Qualifications Framework;
- (b) with due regard for the respective competence of Parliament and the provincial legislatures in terms of 126 of the Constitution, and the rights, powers and functions of the governing bodies of a university or universities and a technikon or technikons as provided in any Act of Parliament.

Functions of executive officer

6(1) The executive officer shall--
- (a) be responsible to the Authority for the execution of its functions in terms of this Act;
- (b) supervise the officers and employees of the Authority; and
- (c) be the accounting officer of the Authority charged with accounting for moneys received, payments made and moveable property purchased by the Authority.

(2) The executive officer shall be assisted in the performance of his or her duties in terms of subsection (1) by such officers and employees of the Authority as the executive officer may designate for this purpose.

Powers of Authority

7(1) (a) The Authority may establish committees and appoint persons who are not members of the Authority to the committees.
(b) The Authority shall appoint the chairperson of every committee.
(c) The Authority may dissolve or reconstitute a committee.
(d) The Authority may delegate any of its powers, excluding the powers referred to in this section, to any of its committees, but shall not be divested of a power so delegated and may at any time withdraw such a delegation.
(e) The Authority may amend or set aside any decision of such a committee.

(2) The Authority may resolve disputes relating to the performance of its functions referred to in section 5.

(3) The Authority may acquire and dispose of assets.

(4) The Authority may cause research to be done which it considers relevant to the performance of its functions.

(5) The Authority may perform any other function which the Minister may designate which is relevant to the National Qualifications Framework.

Meetings of Authority and committees

8(1) The meetings of the Authority or of a committee shall be held at such times and places as the chairperson of the Authority or the committee, as the case may be, may determine.

(2) The proceedings of the Authority or of a committee shall not be invalid by reason of a vacancy on the Authority or the committee, as the case may be.

(3) If the chairperson of the Authority or of a committee is absent from any meeting of the Authority or a committee, as the case may be, the members present shall elect from among themselves a person to preside at that meeting.

(4) The Authority may prescribe rules relating to the procedures at its meetings or at the meetings of a committee, including the quorum for such meetings.

Vacation of office by members of Authority

9. The chairperson or any member of the Authority referred to in section 4(3) shall vacate his or her office if--
(a) his or her estate is sequestrated or he or she enters into a compromise with his or her creditors;
(b) he or she is detained as a mentally disordered person in terms of any law;
(c) he or she is absent from three consecutive meetings of the Authority without leave from the Authority;
(d) he or she resigns by giving notice in writing to the Minister;
(e) he or she, during the course of his or her term of office, is found guilty of an offence and sentenced to imprisonment without the option of a fine.

Funds of Authority

10(1) The funds of the Authority shall consist of--
(a) moneys appropriated by Parliament for the achievement of the objectives of the Authority;
(b) moneys received by the Authority by virtue of the regulations made in terms of section 14;
(c) moneys obtained by means of loans raised by the Authority with the approval of the Minister, granted with the concurrence of the Minister of Finance;
(d) donations, contributions or royalties received by the Authority; and
(e) interest on investments.

(2) The Authority shall employ its funds to defray expenses in connection with the performance of its functions;

(3) (a) The Authority shall in each financial year, at such time and in such form as the Minister may determine, submit a statement of its estimated income and expenditure for the ensuing financial year to the Minister for approval.

(b) The moneys contemplated in subsection (1)(a) shall be employed by the Authority in accordance with the approved statement referred to in paragraph (a), and any unexpended balance shall be carried forward as a credit to the following financial year.

(4) Subject to the provisions of subsection (3)(b), the Authority may invest any portion of its funds in such manner as the Minister, with the concurrence of the Minister of Finance, may approve.

(5) The Authority may charge or waive fees--
(a) for the granting of any registration or accreditation; and
(b) for any services provided by the Authority.

Officers and employees of Authority

11. The Authority may, subject to the conditions of service determined by the Authority, with the approval of the Minister and the concurrence of the Minister of Finance, appoint such officers and employees as the Authority may deem necessary for the performance of its functions in terms of this Act.

Allowances and remuneration of members of Authority and committees

12. The chairperson, every other member of the Authority and any person appointed as a member of a committee under section 7(1) who is not in the full-time service of the State may, in respect of services rendered by him or her in connection with the affairs of the Authority or a committee, be paid by the Authority--
(a) such travelling, subsistence and other allowances; and
(b) in the case of the chairperson of the Authority, such additional remuneration as the Minister with the concurrence of the Minister of Finance may determine.

Auditing and annual report

13(1) The books of account and financial statements of the Authority shall be audited at the end of each financial year by the Auditor-General.

(2) The Authority shall not later than six months after the end of each financial year submit to the Minister a report in such form as the Minister may determine on its functions during that financial year, including an audited balance sheet and a statement of income and expenditure.

(3) The Minister shall table copies of this report, including the balance sheet and statement of income and expenditure referred to in subsection (2), in Parliament within 14 days after the receipt thereof if Parliament is in ordinary session, or, if Parliament is not in ordinary session, within 14 days after the commencement of its next ensuing ordinary session.

Regulations

14. The Authority may, with the approval of the Minister, make regulations relating to--
(a) any matter which by this Act is required or permitted to be prescribed;
(b) the moneys payable to the Authority in respect of matters referred to in section 10(5)(a) and (b); and
(c) any other matter the regulation of which is necessary or expedient to give effect to the provisions of this Act.

Transitional provision relating to existing bodies

15(1) Any body established by law which performs functions similar to those of the Authority as provided in section 5 shall continue to perform such functions until the body is abolished or its functions are changed by law.

(2) No body contemplated in subsection (1) shall be abolished nor shall the functions of any such body be changed until the Authority and the body have jointly examined the implications of such abolition or change and the implementation of the National Qualifications Framework and made recommendations to the Minister.

(3) This section shall not apply to any body established by a private law of a university.

Short title

16. This Act shall be called the South African Qualifications Authority Act, 1995.

MEMORANDUM ON THE OBJECTS OF THE SOUTH AFRICAN QUALIFICATIONS AUTHORITY BILL, 1995

GENERAL

1. The establishment of a National Qualifications Framework (NQF) is advocated in the white papers of the Reconstruction and Development Programme and Ministry of Education.
2. The South African Qualifications Authority Bill, 1995 provides for the development and implementation of a NQF, to be undertaken through the South African Qualifications Authority (SAQA). The Bill will be a major instrument of the Government of National Unity's human resource development strategy, and will advance the integrated approach to education and training. This measure will make possible the achievement of a central objective of the government's human resource development strategy, by enhancing access, mobility and quality in the education and training system.

THE CLAUSES OF THE BILL

Clause 1: Definitions

3. This clause contains the definitions of words and expressions used in the Bill.
4. The definition of "Minister" is of prime importance as this Bill represents a joint function of the Ministries of Education and Labour, who together have responsibility for the bulk of the national human resource development system. The Minister of Labour, who is responsible for labour market-related training, must be satisfied that the development and implementation of the NQF will advance the interests of the training sector. It is therefore necessary for many decisions to be taken by the two Ministers concurrently. The definition of "Minister" therefore spells out the sections of the Bill where the Minister of Education will decide in consultation with the Minister of Labour.
5. The definitions of "qualifications" and "standards" spell out the essential concepts which will underpin the NQF. These have achieved wide acceptance.

Clause 2: Objectives of the NQF

6. The objectives of the NQF are simply stated: to create an integrated national framework for learning achievements, and to enhance access to, and mobility and quality within, education and training.

Clause 3: Establishment of the SAQA

7. The South African Qualifications Authority is established as a juristic person.

Clause 4: Constitution of the Authority

8. As SAQA's jurisdiction covers all education and training, it is essential that its membership should command the confidence of the widest cross-section of education and training sectors. A sector and stakeholder-based membership will permit the Authority to be as representative as possible. However, the Minister is given a discretion to appoint up to six members, based on expertise and experience, in order to improve the representivity of the Authority. The Authority itself may add a further two members by co-option, with the Minister's approval. The maximum membership of the Authority will be 30, including the chairperson and executive officer. The minimum membership, if the Minister and the Authority choose not to exercise their respective discretion, will be 22.

9. The Minister (actually the Minister of Education in consultation with the Minister of Labour) will appoint all members. Their term of office will be three years and may be renewed.

Clause 5: Functions of the Authority

10. The functions of SAQA (as set out in subclause (1)) are to oversee the development and the implementation of the NQF.
11. Subclause (2) spells out the consultative and co-operative principles upon which SAQA will operate. It also requires that SAQA pursue its objectives and execute its functions with due regard for the constitutional allocation of legislative competence to the national and provincial spheres, and the rights, powers and functions of universities and technikons under existing legislation.

Clauses 6 to 14

12. Clauses 6 to 14 reflect conventional provisions for the operation of a statutory body.

Clause 15: Transitional provisions relating to existing bodies

13. Clause 15 provides that other statutory bodies (such as certification councils) whose functions are related to those of SAQA, shall continue to exercise their functions, pending a joint review of the implications of the NQF for their field of operation, and consideration of the need to amend or repeal their statutes. Universities and technikons are specifically excluded from this provision.

OTHER DEPARTMENTS OR INSTITUTIONS CONSULTED

14. A draft Bill was published in the *Gazette* on 2 June 1995 and elicited substantial comment. All departments were sent copies of the draft Bill and invited to respond. A planned programme of consultations with stakeholder organisations was undertaken by members of the Inter-Ministerial Working Group in different parts of the country. Particular attention has been paid to the university and technikon sector. For instance, five separate meetings have been held with the Committee of University Principals to discuss the draft Bill.
15. The overwhelming stakeholder response to the draft Bill is favourable. As a result of the consultations, the draft Bill has been significantly improved.

APPENDIX B

A PROPOSED CLASSIFICATION SYSTEM FOR EDUCATION AND TRAINING FOR THE NATIONAL QUALIFICATIONS FRAMEWORK IN SOUTH AFRICA

Appendix B deals with the classification of education and training subject matter in relation to the National Standards Bodies. It discusses the need for a classification system and the criteria by which this system will be measured.

Introduction

A single system for classification of education and training content, referred to as the South African Content Classification System (SACCS), is presented below as a point of departure for the system that will ultimately be adopted for the National Qualifications Framework (NQF).

This work represents a continuance of that which resulted in a discussion paper from the National Training Board (NTB) Working Group 9 of October 1994 with the title: *"Contributing to the growth of the National Qualifications Framework"* and a revised model published in March 1995. Changes have been made to those models, based on comments received and on further investigative work.

It is hoped that this model will not merely stimulate debate, but accelerate the process that will result in a final model that is both acceptable and appropriate to the needs of the education and training systems of South Africa.

Need for a content classification system

A single, standardised classification scheme is an essential component of the integrated approach to education and training.

A classification system for content is the basis for:

- naming qualifications, education and training programmes and units of learning;
- evaluation and equating of education and training programmes and prior experiential learning;

- student assessment. An outcome statement needs to be evaluated against a certain standard. This is done within the context through which the outcome is undertaken;
- the collection, processing and reporting of information on education and training undertaken by the various types of agencies, institutions and organisations involved;
- the definition of research and development fields;
- manpower and skills planning;
- students deciding on and selecting their career options;
- student guidance and placement;
- career guidance and career counselling;
- structuring institutions that deliver education and training;
- constituting National Standards Bodies.

The fundamental, contextual and specialised elements of knowledge, skills and attitudes which have been proposed as comprising the components of qualifications below Level 5 on the National Qualifications Framework also inevitably relate back to content.

Once a student is placed into a programme, the content is the vehicle through which the learning dialogue occurs and abilities are acquired.

Considerations in the design of the content classification system

In designing a content classification system, an attempt has been made to integrate the needs of the formal and non-formal education systems (also referred to either as the education and training systems or the academic system and the world of work) into a single system.

As many existing local and international frameworks and related documents as possible were identified and examined. These included:

International

- United Kingdom: National Vocational Qualifications (NVQ) system and the General National Vocational Qualifications (GNVQ) system;
- United States of America:
  - Florida's state-wide numbering system for educational courses;
  - Alverno College, Milwaukee, Wisconsin documents on abilities, course descriptions and level descriptions;

    - American College Testing (ACT) document: Performing a National Job Analysis Study;
    - Secretaries' Commission on Achieving Necessary Skills (SCANS);
    - American Society for training and development (ASTD);
- New Zealand: New Zealand Standard Classifications for Industry and Occupations and Essential Generic Skills documents;
- International Standard Classification for Educational Domains (ISCED) which is the international system used for the UNESCO and OECD analyses;
- Australia: Key Competencies Report of the Australian Education Council (AEC).

Local

- Adult Basic Education and Training material and related documents produced by the National Literacy Cooperation (NLC); USWE (formerly Use, Speak, and Write English), the Congress of South African Trade Unions (COSATU), the Centre for Education Policy Development (CEPD) and the Independent Examinations Board (IEB);
- Education Renewal Strategy (ERS) and A Curriculum Model for Education in South Africa (CUMSA, 1994);
- Classification of Educational Subject Matter (SAPSE 003) which is the system used by educational institutions in South Africa (and is an adaptation of the US classification system developed in 1977);
- The specific NATED documents for post school institutions in South Africa, i.e. Technical Colleges (NATED 191), Technikons (NATED 151), Universities (NATED 307 and 308);
- Field and phase committee reports submitted to the Committee of Heads of Education Departments by the National Education and Training Forum (NETF);
- 1986 National Training Board Guidelines for the Accreditation of Training, which proposed major divisions for the establishing of industry training boards (based on the Standard Industry Classification);
- 1994 National Training Strategy Initiative report and the list of proposed sector education and training organisations;
- 1994 National Training Board list of currently registered accredited industry training boards.

Although each system was found to have certain strengths which could be incorporated into a classifications system, each was also found to suffer from deficiencies, the most common being the inability to adequately satisfy the needs of both education and training.

The lessons of other workers in the field are also heeded in the design of the present system. The most notable of these people are: R W Glover of the US Centre for the Study of Human Resources; D Flamming of the Economic Round Table in Los Angeles; K Pearlman of the Government Commercial Services in Virginia; J W Cunningham of Defence Technology Incorporated, Virginia; D W Stevens of the University of Baltimore; A W Parker of the American Electronics Association; M Tucker of the US National Centre on Education and the Economy; V McIntyre Sherwood of James Martin & Co Texas (who has particular experience with the systems of Britain and Europe).

Their most significant lessons are:

- the model that is ultimately implemented must be the result of an inclusive process which involves both educators and trainers and their constituents;
- learning from the mistakes of countries who have, for a long while, been involved in processes such as occupational clustering, skills standards development and content classification necessary for the design of a national qualifications framework system, can save much time and money;
- unless the system is easy to use, sufficiently flexible and allows for improvements to be made, users will either bypass it, "sabotage" it or develop their own systems;
- standards for units of content should be set, as far as possible, by single groups or else the system will become complex to use and difficult to manage;
- the "clustering system must lend itself to electronic manipulation";
- Delphi and Dacum techniques are the most suitable methodologies for optimising the final classification system, as this reduces the amount of philosophical debate which may delay the process;
- the system should assist students who wish to gain access to education and training to "make sense of the skills and knowledge they already possess and to plan their future";

- "Parity of Esteem" between vocational/occupational and academic routes is an issue of particular interest in Europe. When separate systems are developed, for example in Britain, France, Netherlands and Luxembourg, the vocational system, with time, tends to become more academic to try to build up self-esteem in competition with the academic system.

Although philosophical debates are anticipated concerning the paradigm(s) favoured by the designers, no attempt has been made to preempt these. The debates may need to form part of the initial process of bringing all the interest groups together.

After having taken all of the above considerations into account, a set of criteria were developed against which the effectiveness of the content classification system may be assessed. Following this a set of design principles were formulated.

Criteria by which system effectiveness may be assessed

The South African Content Classification System must be:

- internationally acceptable;
- appropriate to the South African situation;
- flexible and adaptable, to facilitate simple cross-reference and application in different contexts and in order to relate to other models;
- open to the addition of fields, domains and subjects in education and training which emerge in the future;
- able to address overlaps and interfaces of different clusters and sub-divisions of content and accommodate the relevant interest groups;
- able to accommodate the needs of the diversity of users (students, adult learners, Education, Training and Development practitioners, administrators, managers, etc);
- supported by a guideline on its use, which includes practical examples.

Design principles and philosophies

The following principles and philosophies are part of the system:

- education and training content fields are integrated into a single system;
- clustering into main fields of content is provided for to allow for a national numbering system that will facilitate administration and, to some extent, guide the formation of standard-setting bodies;

- clusters are classified alphabetically and then numbered. New fields may be added. Although this will result in the new fields being out of alphabetical sequence, it will not upset the system;
- the highest level of grouping (clusters/fields is referred to as the first order of content. Sub- divisions are referred to as second order, third order and so forth - rather than sub-fields, subjects, domains, etc). This is done to avoid the need to invent new terminology at lower orders;
- descriptions have been included to clarify and expand on the scope of first order content in each case. Descriptions will be needed for the lower orders, once the system has been finalised;
- formulation of the rules of combination of content for qualifications and setting of content and abilities standards are perceived to be part of the work of the standard-setting bodies of the South African Qualifications Authority. The curriculation process to derive actual content for various levels and in various programmes is considered to be the responsibility of providers and those bodies accredited by the South African Qualifications Authority to maintain standards. A distinction needs to be made between content in the various fields and specific orders, as "subjective arrays of knowledge", and the form or style by which the content is transmitted and received (programmes). The way in which this distinction is made is given in Figure 1 (see below).

In the example, although Development Studies is a part of the Adult Basic Education and Training programme for the National Literacy Cooperation, it can be considered a programme in its own right, drawing on content from various fields, sub fields and domains (orders of content). A student will be able to accumulate credits for content along either axis of the matrix. The actual location of adult basic education and training content and that of General Education and Early Childhood Educare in a national content classification system needs further debate.

A similar situation exists for the "subject" known diversely as general science, physical science or engineering science which in actual fact comprises physics and chemistry. The former are programmes or conglomerates of lower order content.

Through programmes of learning, learners will gain credits that can be combined to form qualifications. A weighting system will need to be developed to allow values to be assigned to the credits which a student accumulates at programme and specific content level and which will contribute to the final qualification.

Qualifications are named according to the highest level of content that would sensibly describe the content, for example, horticulture diploma; hairdressing certificate (classified under utility services); engineering degree (mechanical, electrical, civil, etc) and general education certificate. There is no need to indicate the source of the qualification obtained, for example, whether the General Education Certificate was obtained through the formal schooling system or an adult basic education and training programme.

Technology has not been included as a separate cluster/category, because each first order classification is considered to consist of a science component and a technology component. *Science* is defined as: *the organised body of the knowledge that has been accumulated on a subject* (subject here refers to any order in the same cluster). *Technology* is defined as: *the application of science*.

A section has been included in each content cluster to list the Industry Training Boards / Sector Education and Training Organisations / Education and Training Qualifications Authorities, professional bodies / associations, industrial sectors and other interest groups who are primarily involved with that content. The list is not inclusive and will need to be periodically reviewed. It is ultimately the responsibility of interest groups to review the classification system and ensure that they are represented on the appropriate National Qualifications Framework structures for setting and maintaining standards.

It is envisaged that the final system will be computerised in the form of an electronic dictionary and will be available in print as well. To set up the initial classification system, however, certain rules are needed to ensure a measure of consistency when assigning the content into a specific content cluster and sub division.

When deciding into which category specific content should be classified, the following decision path may serve as a guideline:

firstly : does the content relate to a specific content cluster or to an instructional programme?
secondly : is there an identical description in the classification system?
thirdly : does the content relate solely to a main/ primary / parent science, for example chemistry, physics, mathematics, biology or social science, which may give a clue as to its assignment?
fourthly : does the content relate to a certain technology (applied science) or have a utility value in a main occupational grouping?
fifthly : does the content relate solely to an aesthetic art or craft?

FIGURE 1: **Matrix showing the distinction between content at the lowest order in each field and content in the form of programmes**

		Instructional Programmes - across clusters and/or orders										
		Business Administration	Development Studies	Nursing	Engineering Science							
Lowest order of content (detailed level, ie: specific)	Accounting	○	○									
	Speech communication	○	○		○							
	Data processing	○										
	English	○	○		○							
	Written communication	○	○		○							
	Biology				○							
	Chemistry			○								
	Physics			○								
	Economics	○	○									

SOUTH AFRICAN CONTENT CLASSIFICATION SYSTEM

First order content

Number	Content clustering
01	Agriculture and Nature Conservation
02	Arts and Artistic Crafts
03	Business Commerce and Management Sciences
04	Communication Science and Languages
05	Education, Training and Development
06	Engineering and Manufacturing Processes
07	Human and Social Sciences
08	Law, Military Science and Security
09	Mathematics
10	Medical Sciences, Health and Social Services
11	Natural and Life Sciences
12	Utility Services

Detailed classification system

01 AGRICULTURE AND NATURE CONSERVATION

Content that is concerned with:

- the science and practice of cultivating the soil and rearing animals;
- the production of food and fibre;
- the conservation and development of soil and land;
- forestry and fisheries;
- wildlife conservation and hunting;
- outdoor recreational facilities;
- horticulture;
- the breeding, rearing and training of pets.

Industry Training Boards / Sector Education and Training Organisations / Education and Training Qualifications Authorities with primary involvement here include:

- Fishing, sugar, forestry and logging, subsistence farming, dairy, hunting. Professional bodies and other interest groups include: SAAU, SA Wildlife Society.

Typical lower order content would include:

- Agricultural economics, agricultural extension, farm management;
- Animal sciences, plant sciences, pastures, irrigation, animal husbandry;
- Fisheries, fish and fresh water conservation, coastal and marine conservation;
- Wildlife, veld and game management, hunting;
- Horticulture, weed and pest management, landscape technology, greenhouse and nursery, garden services, parks and recreation management, green keeping;
- Soil science, land reclamation;
- Renewable natural resources;
- Forestry, timber and wood products; and
- Specific agricultural themes, for example, pig production, poultry, equine studies, viticulture, dairy produce, brewing and sugar production, abattoirs and butchery.

Possible problem area(s):

- Should wood products be in another category e.g. Utility Services?
- Should production, e.g. brewing, sugar production and dairy product processing be included in the Plant operation category of Engineering and Manufacturing Processes?

02 ARTS AND ARTISTIC CRAFTS

Content that is concerned with:

- the history and philosophy of arts and crafts;
- the creation and perception of aesthetic phenomena (visual, auditory and kinaesthetic);
- human skill in the creation and/or execution of art forms;
- the use of technology to complement arts and crafts;
- media of artistic expression and aesthetic artefacts;
- decorative design and handicrafts;
- the use of art forms for therapy;
- the use of arts and crafts to improve the aesthetic value of one's surroundings (but excluding architecture and landscaping);
- the use of art to adorn people and places;
- the entertainment of people through visual and performing arts.

Industry Training Boards / Sector Education and Training Organisations / Education and Training Qualifications Authorities with primary involvement:

- Media and Arts; Textiles and Apparel (textiles, clothing and footwear). Professional bodies and interest groups include: SA Actors Union.

Typical lower order content would include:

- Art history and philosophy, appreciation and criticism;
- Handicrafts such as jewellery, leather crafts, floral arts, pottery and ceramics, sculpture, wood carving;
- Visual and graphic design, 3-D design, interior design.;
- Textile and fashion design, dress-making and pattern design;
- Visual arts - drawing, painting, photography (camera and video/TV), lighting, film, darkroom practice, body painting;
- Performing arts - music, singing, dance, ballet, opera;
- Theatre crafts - drama, pantomime, mime, dialogue, stage craft, costume construction, decor painting, lighting, make up, acting, stage dressing, puppetry;
- Directing and producing;
- Acoustics;
- Arts therapy;
- The circus (possibly?).

Possible questions:

- Are handicrafts not actually Utility Services (12)?
- Are textile and fashion design, dress-making and pattern design not Utility Services?
- Do Art therapies not fall within Social and Health Services?

03 BUSINESS, COMMERCE AND MANAGEMENT SCIENCES

Content which is concerned with:

- the science and practice of buying, selling and exchange of products and services in order to gain a profit, benefit or advantage;
- the planning, leading, organisation and control of organisations of any kind;
- leadership of people, in production, selling and the delivery of services and the management of enterprises;
- development of business acumen;

- the control of finances and commercial processes;
- the administration and related processes in enterprises and organisations.

Industry Training Boards / Sector Education and Training Organisations / Education and Training Qualifications Authorities with primary involvement:

- Wholesale and retail trade; warehousing and storage; ABSA industry Training Board; Local Authorities Industry Training Board; business services; central government; local government. Professional bodies and interest groups include: CFA, Institute of Chartered Accountants, Institute for Personnel Management, SABPP, SA Institute of Secretaries.

Typical lower order content would include:

- Accounting (financial / cost management), business finance, government finance, investment, banking, stock exchange, taxation, auditing, credit management;
- Business administration, government administration, business information management, office systems (electronic), clerical, secretarial, reception, typing and word processing, business machines.;
- Marketing, advertising, public relations, commercial practice, purchasing, shipping and forwarding, store and inventory management, importing and exporting.;
- Real estate, valuation, registration of deeds;
- Enterprise management, supervision, leadership, management, organisation and work study, labour relations, remuneration.

Possible questions:

- Should Marketing and Advertising not perhaps be classified under 04 (Communication Science and Languages)?
- Should registration of deeds not be linked to Legal Services?

04 COMMUNICATION SCIENCE AND LANGUAGES

Content which is concerned with:

- the history of communicating and languages;
- the science and practices involved in the creation, transmission and evaluation of messages;
- verbal and non-verbal communication;

- the theoretical and practical aspects of languages;
- specific languages, their structure and literature;
- the development of skills in reading, writing and conversing in languages;
- communication methods and the use of technology in communication;
- interpersonal communication, organisational communication, state and international communication;
- culture and communication.

Industry Training Boards / Sector Education and Training Organisations / Education and Training Qualifications Authorities with primary involvement:

- all Industry Training Boards accrediting adult basic education and training 'fundamental category' programmes; printing and publishing, post and telecommunications. Professional bodies and interest groups include: Institute for Personnel Management, SABPP, AKTV, SA Akademie vir Wetenskap en Kuns, speech therapists, editors and translators, language teachers, provincial education authorities.

Typical lower order content would include:

- Communication science, methodology and technology;
- Linguistics, lexicography, phonetics;
- Reading, writing, speaking and listening skills;
- Translation, editing, media studies and listening skills;
- Specific languages (local, foreign, classical) and literature;
- Grammar, rhetoric, dialectics;
- Braille, sign language, Morse code, semaphore, heliograph;
- Speech therapy, hearing therapy;
- Non-verbal communication.

05 EDUCATION, TRAINING AND DEVELOPMENT

Content which is dedicated to:

- the science and practice of the development of people and organisations with respect to learning, education and training;
- education and training leadership, management and administration;
- education and training systems and phases (for example educare, primary, secondary and tertiary);
- education disciplines;

- teaching of specific subject matter;
- Education, Training and Development practitioner training;
- counselling and guidance;
- Education, Training and Development remediation and special education;
- Education, Training and Development evaluation and research;
- educational technology and media.

Main groups which might be interested in this category:

- Although all industry training boards / Sector Education and Training Organisations / Education and Training Qualifications Authorities will have an involvement in this category, the accreditation agencies and authorities of the formal education system will have a particular interest in this category (for example, the Certification Council for Technikons, SERTEC; and the South African Certification Council, SAFCERT). Professional bodies would include teacher's unions, SAASTD, Institute for Personnel Management, SABPP.

Typical lower order content would include:

- Education and training theory, learning theory;
- Education part disciplines, phase of education;
- Comparative education and training;
- National education and training policy, management and administration, training management, the National Qualifications Framework, organisational Human resource development/Education, Training and Development policy, management and administration, organisational development, learning organisation, curriculum development, specific subject didactics, education and training phases, educare, pedagogics, andragogics, gerontogogics, special education (remedial and for the gifted);
- Guidance and counselling;
- Teacher training, trainer development: This includes trainers in industry and educators at all levels, e.g. Early Childhood Educare and General, Further and Higher Education;
- Educational technology and media;
- Educational evaluation, assessment, recognition of prior learning;
- Educational research.

06 ENGINEERING AND MANUFACTURING PROCESSES

Content that is concerned with:

- the science and practice of design, construction, operation and maintenance in mining, environmental, industrial and service industry fields;
- specifics relating to structures, equipment, machinery and devices used by various fields and disciplines;
- information technology and computers.

Industry Training Boards / Sector Education and Training Organisations / Education and Training Qualifications Authorities whose primary focus in this category are:

- Mining Industry Education and Training Industry Training Board, Chemical and Allied Industry Training Board, Metal Engineering Industries Education and Training Board, Plastics Industry Training Board, Civil Engineering Industry Training Board, ATBLA, Building Industries Training Board, Automotive Industries Training Board, Automobile Manufacturing Industry Training Board, tools and vehicle parts, ECA, EAITB, Power Construction Industry Board, Gas and Water supply, Information Technology Industry Training Board, Armscor, Transnet Industries Training Board, Maritime Industry Training Board, Road transport Industry Training Board, Aerospace Industry Training Board, Printing Newspaper and packaging Industry Training Board, Food and beverages, Carbonated soft drinks Industry Training Board. Professional bodies and interest groups include the Institute of Artisans, ASARET, ECSA, AS&TS, SACNAS, WISA and a host of other bodies affiliated to AS&TS.

Typical lower order content:

- Architecture, draughting, cartography, survey, city and regional planning, engineering design, road design;
- Building, construction management, structures, glazing, masonry maintenance, air conditioning and refrigeration, plumbing, carpentry, the "trades", product service, welding;
- Plant operation and plant optimisation. Plant Operation/Production and Manufacturing Processes for industries such as textiles, clothing, footwear, paper, pulp, printing, newspapers and appliances. Food processing. Assembly of cars, boats, aircraft, white goods. Manufacture of components;

- Materials design and manufacture, tool manufacture, materials testing, mining, minerals processing, petroleum and gas exploration, power systems, power supply, water supply, sanitation, drainage;
- Information technology and computers, telecommunications.;
- Transport (driving, flying, navigation and seamanship).

Specific fields and disciplines include:

- Aerospace, aeronautics, agriculture, bio-systems, automotive industry, chemical, civil, computers, electrical (heavy and light current), mechanical, environmental, industrial, geological, marine, materials, metallurgical, mining, nuclear, oceanographic, petroleum, water and sewage treatment.

Possible questions:

- Should architecture (and possibly also related fields such as draughting, cartography and city and regional planning) be given a separate category?
- Should information technology have a category of its own?

07 HUMAN AND SOCIAL SCIENCES

Content that is concerned with:

- philosophy and religion;
- human behaviour (past and present), history, cultures, and societies, social interaction, politics.

Main interest groups in this category:

- The primary interest group for this category of content is the education sector.
- Professional bodies include the South African Medical and Dental Council, SABPP, Institute for Personnel Management, SA Institute of Economists, SA Genealogical Institute, SA Council of Churches, specific churches and religious groups will also have an interest here.

Typical lower order content:

- Archaeology, anthropology, history;
- Geography, economics (macro and micro), political science, political theories, sociology, psychology, philosophy, religion, theology, specific religions, psychometrics, ethics, metaphysics, life and world views, genealogy.

Possible questions:

- Does economics really fit in here, or should it be transferred to Business, Commerce and Management Sciences?

08 LAW, MILITARY SCIENCE AND SECURITY

Content that is concerned with:

- the principles and procedures accepted, developed and enforced by institutions of government for the social order, in the form of legislation and common law;
- causative factors and tactical principles of warfare, armed conflict and defence.

Training Boards / Sector Education and Training Organisations / Education and Training Qualifications Authorities primarily active in this category are:

- social and community services, Armscor, local authorities Industry Training Board, central and local government services.
- Other interested bodies and professions are: the Law Council, other legal bodies, such as Lawyers for Human Rights and the Bar Council, the South African National Defence Force and its branches, the South African Police Services and the South African prison and auxiliary services.

Typical lower order content:

- Law and justice, international law, mercantile law, jurisprudence, company law, property law, labour law, tax law, private law, public law, legal profession, legal history, military history, military organisation, national security and defence, military law, weaponry, drill and military ceremony, army, air force, navy, medical corps, marine corps, police, criminology, prisons and correctional services, private investigators, detective work.

Possible questions:

- Should the title also reflect Applied Law? How? Law, Applied Law and Military Science?
- Can Law, Military Science and Security really be grouped together?

09 MATHEMATICS

Content that is concerned with:

- the sciences of logical symbolic language and their applications.

Main interest groups for this category:

- Professional bodies and the educational profession have a primary interest here, for example, AMICA, AMESA, mathematics educators, statisticians, philosophers, business, commerce and financial professions.

Lower order content:

- Algebra, arithmetic, geometry, logic, sets, number theory, topology, calculus, probability, statistics, numerical analysis, applied mathematics, trigonometry, business mathematics, consumer mathematics.

Possible questions:

- Does this warrant an own category?

10 MEDICAL SCIENCES, HEALTH AND SOCIAL SERVICES

Content that is concerned with:

- restoration or preservation of health through the use of drugs, surgical procedures, manipulations or other curative and remedial methods;
- emergency services and safety;
- public health and health care;
- the study of the nature, prevention and treatment of animal diseases and the medical and surgical treatment of animals;
- the study of the role of food and nutrition in personal and family living;
- sport, recreation and human movement science;
- the knowledge and skills required to develop, organise, store, retrieve, administer and facilitate the use of collections of information in various formats.

Professional bodies, boards and institutes include:

- SA Medical and Dental Council, SA Nursing Council, SA Institute of Safety Engineers, Government and local authorities, social and community services, welfare, local authority Industry Training Board, NOSA.

Typical lower order content includes:

- Care of elderly, disabled and children, counselling, social work, family care public health and health inspection;
- Food, nutrition, dietetics, sport, recreation and human movement science, specific sports, physical education;
- Safety and fire services;
- Para-medical, ambulance and emergency care;
- Nursing and health services;
- Dental and oral health, dental specialisation, dental assistance, orthodontics, maxillo-facial and oral surgery;
- Medical science and practice, medical specialisation (for example, urology, cardiology, ear-nose and throat, pulmonary, etc.);
- Physiotherapy, podiatry, chiropody, reflexology;
- Alternative medicine, homeopathy, traditional medicine, natural healing;
- Environmental hygiene / health, occupational therapy;
- Pharmacology;
- Radiology, nuclear medicine, ultra-sound, X-ray;
- Optometry;
- Laboratory medicine, medical technology;
- Medical forensics;
- Animal health, veterinary science;
- Funeral undertaking management, mortuary practice, burial and cremation services.

Possible issues:

The following content in this category may need to be debated to decide if it best fits here, somewhere else or in an own category:

- Sport recreation, specific sports and physical education;
- Animal health and veterinary science;
- Household management, food, cooking and food preservation.

11 NATURAL AND LIFE SCIENCES AND TECHNOLOGIES

Content concerned with:

- the study of objects or processes of matter, energy and associated phenomena;
- applications in the fields of natural and life sciences.

Main groups interested in the category:

- Training Boards / Sector Education and Training Organisations / Education and Training Qualifications Authorities, professional bodies and fields primarily concerned with this field include: Chemical and Allied Industry Training Board, food and drink industries, water and sanitation, plastics, certain engineering industries and technologies, SACNAS, Engineering Council of South Africa, ASARET, SA Chemical and Allied Workers Union, textiles, clothing, footwear, agriculture, medicine.

Lower order content includes:

- Astronomy;
- Biology, micro-biology, botany, zoology, bio-chemistry, anatomy, physiology;
- Environmental science, geology, meteorology, climatology, oceanography;
- Chemistry, analytical chemistry, organic and inorganic chemistry, the chemical industry, physical chemistry, explosives (theory), physics, nuclear physics, laboratory practice.

Possible questions:

- Should chemical industries be included under another category such as Engineering and Manufacturing Processes?

12 UTILITY SERVICES

Content that is concerned with:

- provision of a diversity of goods and services to consumers;
- the manufacture of customised products by labour-intensive processes.

Boards, institutions and professional bodies primarily concerned with the area are:

- Furniture Industry Training Board, food and beverages, printing, newspaper and packaging Industry Training Board, Hospitality Industry Training Board, Hairdressing and Cosmetology Industry Training Board, informal sector, wholesale and retail trade, post, SA Museum Council, SA Genealogical Society.

Lower order content includes:

- Baking, cooking, food preservation and household management;
- Beauty technology, hairdressing, cosmetics;
- Furniture, non-metal goods manufacture;
- Wholesale and retail, distribution and storage;
- Book binding and publishing;
- Libraries, museums, galleries and archives, library science.

Possible questions:

- Should wood-products be included here rather than in category Agriculture?
- Should artistic handicrafts, textile and fashion design, dress-making and pattern design be included here rather than under Arts and Artistic Crafts?

PROPOSED NATIONAL STANDARDS BODIES

As a point of departure, the authors of this document[1] propose, thirty-eight National Standards Bodies. These National Standards Bodies are located at the second order level. Each National Standards Body will, in turn, have sub-committees to address standards at discipline levels.

These National Standards Bodies, at first and second order levels are represented diagrammatically on the following pages. Where possible, overlaps have been noted.

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[1] It should be noted that, in contrast, the authors of this *book* have proposed using the highest order of fields of learning classification for the establishment of National Standards Bodies with a number of sub-committees ranged under each of the highest order National Standards Bodies.

01 **AGRICULTURE AND NATURE CONSERVATION**

- **Agriculture and Nature Conservation** **01 / 01**
- **Nature Conservation** **01 / 02**
- **Horticulture** **01 / 03**

02 **ARTS AND ARTISTIC CRAFTS**

- **Visual Arts** **02 / 01**
- **Performing Arts** **02 / 02**

03 **BUSINESS, COMMERCE AND MANAGEMENT SCIENCES**
(Includes Government services administration)

- **Financial** **03 / 01**
- **Administration** **03 / 02**
- **Commercial Practice** **03 / 03**
- **Property** **03 / 04**
- **Marketing** **03 / 05**
- **Leadership, Management and Supervision** **03 / 06**

04	COMMUNICATION SCIENCE AND LANGUAGES

Communication	04 / 01
Languages	04 / 02

05	EDUCATION, TRAINING AND DEVELOPMENT

Education	05 / 01
Training and Development	05 / 02

06	ENGINEERING AND MANUFACTURING PROCESSES

Design, Construction and Maintenance	06 / 01
Production and Manufacturing Processes	06 / 02
Mobile Equipment and Materials Handling	06 / 03
Mining and Minerals Processing	06 / 04
Computer Sciences and Information Technology	06 / 05

- **07** **HUMAN AND SOCIAL SCIENCES**
  - Histories 07 / 01
  - Geographic / Economic 07 / 02
  - Individuals and Societies 07 / 03
  - Religions 07 / 04
  - Marketing 07 / 05

- **08** **LAW, MILITARY SCIENCE AND SECURITY**
  - Law 08 / 01
  - Military Science & Security 08 / 02

- **09** **MATHEMATICS**
  - Pure Mathematics 09 / 01
  - Applied Mathematics 09 / 02

10 MEDICAL SCIENCES, HEALTH AND SOCIAL SERVICES

ANIMA

HUMAN

Medicine and Health	10 / 01
Sport and Recreation	10 / 02
Food and Nutrition	10 / 03
Fire and Safety	10 / 04

11 NATURAL AND LIFE SCIENCES AND TECHNOLOGIES

Natural Sciences	11 / 01
Life Sciences	11 / 02

12 UTILITY SERVICES

Hospitality and Tourism	12 / 01	
Beauty Technologies	12 / 02	
Publishing and Book Binding	03 / 03	
Archiving and Information Storage	12 / 04	
Wholesale and Retail ○	12 / 05	or (03 / 03)
Product Manufacture ○	12 / 06	or (02 / 01)

○ Part of National Standards Bodies in other fields as indicated.

FIRST ORDER (Content Fields)	SECOND ORDER (Number of National Standards Bodies)	THIRD ORDER (National Standards Bodies Working Groups)	
1	3		
2	2		
3	* 6 (1)		
4	2		
5	2		
6	* 5 (1)		
7	4		
8	2		
9	2		
10	4		
11	2		
12	** 4 (2)		
TOTAL **12**	**38**		

* (1) indicates 1 x second order field included here

** (2) indicates that 2 additional second order fields here could be allocated to other NSBs, ie fields 3 and 6.

The South African Qualifications Authority Act provides enabling legislation which will bring about the creation of a National Qualifications Framework. The growth of such a framework will require the best efforts of people in education, development and training, a process which will demand an understanding of the NQF vision and a willingness to work with others towards the realisation of an equitable and accessible learning framework.

Ways of Seeing the National Qualifications Framework has been produced as a stimulus to thinking about what a genuinely South African qualifications framework should be like.

Ways of Seeing the National Qualifications Framework offers readers a timeous and thoughtful compilation of some of the best current thinking about questions such as:

- *What will an authority like SAQA need to be like and do to succeed?*
- *What will an outcome need to look like if we are going to be able to compare outcomes across learning pathways?*
- *How can one level possible be distinguished from another?*
- *What constitutes a qualification?*
- *How will quality be assured?*

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